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ABSTRACT

Presented in this report is a summary evaluation of the Tri-District Cooperative Development of Land Laboratories For Conservation and Outdoor Education project. School districts participating in the project include Worthington, Grandview Heights, and Westerville, Ohio. Part I of the three-part report evaluates the overall efforts of the three year program with particular reference to the third year activities. Reactions and recommendations from those associated with the program, the initiators (committee members, consultants, and administrators), assistees (teachers and principals), and recipients (students) are given. Part II encompasses a history of the project, unpredicted outcomes, impact of the project on the school and adult population, cooperative efforts, dissemination of information and materials, project funding procedures, and costs. Thirteen appendices comprise Part III, covering tabulated replies from questionnaires and inventories and phase-in reports from the three participating school districts. This work was prepared under an ESEA Title III contract. (BL)

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TRI-DISTRICT COOPERATIVE DEVELOPMENT

OF LAND LABORATORIES

FOR CONSERVATION AND OUTDOOR EDUCATION

SE 012 637

SUMMARY EVALUATION

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ESEA TITLE III TRI-DISTRICT COOPERATIVE DEVELOPMENT OF LAND LABORATORIES FOR CONSERVATION AND OUTDOOR EDUCATION

SUMMARY EVALUATION

by
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CHAPTER I

In an earlier Title III document, the writer set forth a plan and rational for evaluating the ESEA Tri-District Outdoor-Conservation Education Project (Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education).[1] The process and philosophy of evaluation at the close of the third project year and the termination of federal funding was the same as outlined at that time.

Essentially, the purposes of this evaluation were to:

a. review what has (]) happened, (2) been done, and (3) been accomplished;

b. learn the degree to which the program has progressed toward its goals or objectives;

c. find in what ways the program has been of benefit;

d. determine if the program should be continued as is, expanded, diminished, or changed;

e. identify which of the program aspects could be recommended for the consideration of other schools or institutions.

Readers of the earlier evaluation report (contained in the third year continuation proposal) will note that the emphasis and focus of the program shifted during the second year to one of impact on teachers and children and away from the development of sites and facilities.

Monaghan, the first year project evaluator summarized objectives as to

". . . increase the quantity and effectiveness of conservation and outdoor education, to develop facilities for such education, and to develop inter-district cooperation for the improvement of education.

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[1] Malcolm Swan "Evaluation," *Continuation Grant Application for Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education*. Worthington, Ohio: Worthington Exempted Village School District, 1970, p. E 1.

Assuming that the conservation aspects are implicit in the educational objectives, the specific objectives might be briefly summarized to emphasize:

1. Physical facilities

2. Teacher involvement, training, and inter-district cooperation

3. Public support

and, of course, the evaluation aspects of the original objectives."[2]

At that time Monaghan concluded that teacher involvement was the single greatest challenge and opportunity for the program. He further recommended the acquisition of a headquarters, expansion and improvement of the inservice program and pointed to the need for group decision making on the part of administrators to insure inter-district cooperation and support subsequent to the termination of federal funding.

The Second Year

Briefly, the project program consisted of the following at the close of the second year:

1. Development and maintenance of a series of land laboratories, outdoor teaching sites, and a program headquarters.

2. The acquisition, maintenance, and distribution of apparatus, equipment, and materials for conservation and outdoor education.

3. Development and dissemination of teaching materials and resource units for conservation and outdoor education.

4. An extensive program of inservice training for teachers in the areas of conservation, outdoor, and/or environmental education.

5. Assistance to teachers in planning, conducting, and follow-up of outdoor experiences.

6. Organization and administration of a program of resident conservation and outdoor education for the 6th graders in tri-district schools.

7. Intradistrict and agency cooperation in the development of school and public concern for conservation and environment.

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[2] Robert Monaghan, "Evaluation of Project Objectives, "*First Continuation Grant Application for Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education*. Worthington, Ohio: Worthington Exempted Village School District, 1969, p. 2.

At that time, the project staff consisted of three fulltime professional staff (a project Director and two outdoor teachers), a fulltime secretary and supplementary parttime help. They worked out of a newly acquired headquarters building located at an older well established land laboratory in the sponsoring district. At that time, concern was expressed by the Evaluator about the lack of long range planning, particularly in view of concerns being expressed about the continuation of the project, the apparent need for rethinking the program and the lack of contact between program personnel and some teachers and schools. Considerable attention was given to the positive (there were many) and negative aspects of the program in the evaluation one year ago, and several recommendations were offered for the consideration of the decision makers.[3]

The Third Year

The Evaluator did not believe that the emphasis of the program should be shifted in the third year. It seemed as if the program begun that second year was just getting under way and needed time to mature. Perhaps one of the greatest problems seen at that time dealt with the interpersonal relationships within the outdoor education staff and between them and some key administrators.

In setting forth the thrusts and goals for the third year, the proposal writers indicated that these were to receive greater attention the third year:

a. Employment of para professionals or teacher aids to assist teachers when working outdoors.

b. Development of audio-visual materials, film loops, and other materials.

c. Development of displays and other materials to make the outdoor education center more useful.

d. Involvement of secondary schools in the resident outdoor education program on a pilot basis.

Specific activities to receive emphasis were to:

1. Increase the number of classes participating in the on-school-site gardening program from 75 to 120.

2. Achieve 100 percent participation in the sixth grade resident outdoor education program.

3. Initiate an environmental studies elective course at the high school level in all three school districts.

4. Decrease emphasis on development of selected school sites for land laboratories and increase minor development activities to include all school sites in the three school districts.

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[3] *Swan, Ibid. p. P. E. 59-64.*

5. Conduct on-school-site workshops at every school at sometime during the 1970-71 school year.

6. Replace stipend payments for attendance at outdoor education workshops with college credit or inservice credit.

7. Increase involvement of the communities in the project activities through use of community resource personnel.

8. Initiate a resident outdoor education program at the high school level.

9. Increase public understanding and support of outdoor education through greater personal contact with civic and community organizations and greater use of the mass media.

10. Disseminate project information to other parts of the State of Ohio by conducting an environmental education leadership conference.[4]

During the first half of the year the project staff continued largely as it had during the second year. The resignation of the Project Director at midyear, however, and the realization that the program might not be continued as a cooperative venture for various reasons resulted in what might be construed a "holding action" from that point on. Hence few of the new thrusts or goals set forth in the project were initiated or realized.

The Evaluative Program

The evaluative program at the close of the third year, with minor modification, was the same as that used at the end of the second year and set forth on pages E 9 and E 10 of the Continuation Application:

Because of the focus of the project, its impact on these groups received primary attention in the evaluative program: (1) project initiators, (2) assistees, and (3) recipients. Instruments were designed to measure this impact and to solicit the reactions of persons in these categories about various aspects of the program.

a. Project Initiators - Persons involved in the organization of the project, members of the outdoor education committee, consultants, citizens, administrators, and members of the project staff were categorized as the project initiators. These are the persons most closely associated with the project.

   The degree to which the dream or vision of these persons had been satisfied was believed to be of extreme importance in evaluation. Instruments were designed to solicit the

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[4] *Continuation Grant Application for Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education. Worthington, Ohio: Worthington Exempted Village School District, 1970, p. 75-80.*

reactions and judgements of these persons about the values, success, or failure of various specific aspects of the project. They were also asked to set forth their recommendations about the project.

b. The Assistees - The teachers and principals whom the project was to help were categorized as the assistees. It was thought that if they saw the progress in a favorable light and believed it to be making a difference in their teaching and their pupils, reason existed to believe that the project was on the right track. If most of them were negative, the program had little chance for success.

Indicators of the view of persons in this category was thought to be the amount or number of conservation and outdoor education experiences being provided, use of the sites and facilities, and participation in the inservice training being offered. Hence, the decision to report this quantitative data.

To obtain additional information, instruments were constructed to solicit the reactions of the principals and a sample of the teachers as to the values of outdoor or field experiences and various services offered in the program. An instrument was also used to obtain reactions from the participants in workshops offered as a part of the project. Another instrument was designed to solicit teacher opinion about the effects of the resident program on pupil behavior.

c. The Recipients - The children and their parents were categorized as the program recipients. The impact of the project on them was attached by:

1. Administering the ISAIA and the Interest Inventory (before and after basis) to a sample of pupils in the resident program.

2. Administration of these instruments to pupils in classes participating extensively in the project and comparing responses with those of pupils in classes not participating.

3. Construction and administration of an opinionnaire to a randomized sample of children soliciting their opinions about the values of the resident program and other outdoor experiences.

4. Administering a similar instrument to the parents of these children soliciting their reactions.

5. Asking a group of children who had participated in such programs previously to discuss these programs, record

their discussion, and to mail the tape directly to the Evaluator for his analysis.[5]

Changes in the above related mainly to the deletion of the fifth item under "c" above and the return of many of the instruments to the outdoor education secretary rather than directly to the Evaluator to save mailing costs.

As a supplement to last year's program, however, the Evaluator engaged a colleague who spent three days with him in the Tri-District area interviewing teachers, administrators, and others about the program.[6]

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[5]Swan, Ibid. p. E 9 - E 10.

[6]Mr. Stuart Seim, Faculty Assistant in the Department of Outdoor Teacher Education, Northern Illinois University. Seim will complete work on a Master's Degree in Outdoor Teacher Education at NIU this summer and will continue toward the doctorate in the same area at Southern Illinois University. He assisted in writing the section dealing with the reactions of Assistees.

EVALUATION - CHAPTER II

PERCEPTIONS AND REACTIONS OF PARTICIPANTS

The effect of this program upon the children it served was, of course, thought important in evaluation. Also important were the perceptions of persons directly involved with it, and those it was designed to assist. Hence, evaluative reactions and recommendations from persons in all these groups--INITIATORS, ASSISTEES, AND RECIPIENTS were believed necessary.

I THE INITIATORS

The persons most directly involved with the project (members of the Outdoor Education Committee, consultants who helped to plan it, administrators, staff members, and others) were called the INITIATORS. Their opinions were considered to be of upmost importance in evaluation.

These persons had a "dream" as to what the project might accomplish. Each expected it to do some things and to work in certain ways. Others helped chart its course and some of them worked with it from day to day. These persons participated in decisions regarding objectives, ways and means, and operation. Knowing the degree to which their expectations were met was believed important, for if they remained enthusiastic, satisfied, and supportive after three years, the program had probably been on the "right track." If not, it had probably fallen short. Furthermore, these initiators probably knew more about the program and the perceptions of their colleagues about its values than any other group.

An instrument (resembling one used in evaluating the ESEA Title III Outdoor Education Project in McHenry County, Illinois) was constructed to solicit reactions from these persons.

This instrument, the INITIATORS EVALUATION, was distributed to forty-four persons in 1970 with the request that they be returned by mail to the Evaluator. Twenty-nine were received. This same instrument was sent to 50 persons in 1971. Twenty-two were returned. In addition, the Evaluator interviewed several of the persons in this category about the program.

The INITIATORS commented in greater detail on the questionnaire items than respondents in any other group and appeared very willing to discuss the program, its strengths and weaknesses and to offer possible explanations or reasons as to why it was not being continued as a tri-district operation.

Since the comments of each person in this group were considered to be of upmost importance in this evaluation, the tabulations that follow show the way in which these persons responded to each question. All the comments provided in 1971 are included. The 1970 comments may be found in a previous evaluative report.

ITEM I - Based upon your observations of CHILDREN BEING TAUGHT OUTDOORS and participating in outdoor education experiences, please respond to these questions by placing an "X" in the appropriate space and adding your comments in the space provided.

A. Do the pupils or students appear to respond with enthusiasm and interest to the instruction given?

1970	15	12	1		
1971	9	9	1		
	High				Low

Comments:

Outdoor activities provide a break from the routine, thus creating a high interest level in these activities.

Depends generally on the teachers as a teacher. Outdoor Education is a great media through which to teach any subject.

As in the classroom there is some reluctance to respond, however, I have noticed that some who are not responsive in the classroom are more so outdoors.

That's how I hear it.

I believe we have had an unusually high response to outdoor education programs on all levels-- K - 5 this school year. The enthusiasm of the staff and students has been gratifying.

Most children enjoy the outdoors and the opportunity to learn about it. If handled properly this instruction can be a very worthwhile experience. The Tri-District people have met this challenge.

Many students respond in the outdoor situation who do not respond to the more conventional classroom setting. This seems to be particularly true of less able students.

Much better listening outside than indoors. Kids can do the things they talked about outdoors.

B. Do you believe the instruction you observed outdoors and in the field a worthwhile and valuable addition or supplement to the school program?

1970	18	7	2			
1971	13 (High)	7	1			(Low)

Comments:

You can't really learn about the outdoors unless you go there.

Many worthwhile and useable ideas that can either be used as is or improvised to work at any grade level.

Natural setting, practical problem.

C. Do you believe that the type of instruction and teaching you have observed in the field and as part of this program should be encouraged and made a part of the curriculum at all grade levels?

1970	16	4	4	4	
1971	10 (High)	8	2	1	(Low)

Comments:

Resident outdoor education for a week should be only for sixth grade level.

I think it should be made available to teachers who care to participate but not made an expected part of the curriculum.

Motivation of students would be a minor problem.

A great deal of our success seemed to be related to voluntary involvement.

Based upon three years of response, and lack of it, I have no reservations about the above possibilities as it relates to the elementary schools. The secondary level has been a disappointment. Scheduling periods undoubtedly have much to do with this seeming lack of interest. Teachers are specialists; and many doing their own thing.

It is difficult for a voluntary program to become an entrenched part of the curriculum.

Seems more appropriate at the intermediate grade levels.

ITEM II - Based on your observation and the information available to you, do you feel that the persons that are a part of the Tri-District Outdoor Education Project staff are well qualified and equipped to handle their responsibilities?

1970	12	11	5	1		
1971	12 (High)	6	3			(Low)

Comments:

I have been very well pleased with their work.

The range of qualifications varies with individual staff members.

I know! Knew all three of them.

Dean and Bob, YES!

Qualified and equipped. Yes! Especially our former coordinator. Motivation and application was sometimes lacking.

Problem of three chiefs!

Much of what we have received is not relevant to our grade level. We had more service to our schools in Westerville when Mr. Knight was alone.

Responsibilities? Often late; time schedule and organization are important.

ITEM III In your opinion, has there been sufficient provision made to acquaint teachers and administrators with this program and to assist them to participate in it?

1970	9	9	6	3	2	
1971	6 (High)	8	6	1		(Low)

Comments:

Follow through is lacking. Not enough communication at the individual school level.

Workshops were valuable. Guidelines and the manuals developed are good.

The outdoor education staff has done a good job with publicity and training programs. Not so good with helping individual teachers.

Excellent in-service programs on a continuing schedule.

There was a good idea to have a half day released time for a teacher workshop, but it didn't happen.

We could have used more newsletters about Worthington activities to Worthington staff. We could also have used news releases to better advantage.

Communication problem here too. I learned that numbers of teachers have not learned of project.

First part of question - Yes. Second part of question - Yes.

ITEM IV React to the approach used in which classroom teachers are merely encouraged to utilize this program on a voluntary basis and to integrate outdoor experiences into their ongoing programs rather than to expect or require all teachers and all children to participate and to make outdoor and conservation education a separate subject.

1970	7	5	9	2	2	
1971	7	3	4	3	1	
	High				Low	

Comments:

Which do you want? This is a two part question.

I don't feel it should be presented on a voluntary basis.

Depends entirely on the skill of the one who does the encouraging. Some are great motivators.

Some special teachers can not utilize this program.

As mentioned in IC, a voluntary program is difficult to establish in all grades and all classrooms, however, a cumpulsory program would force uninterested teachers to participate which might be more harmful than gainful.

Coercion won't work. That's my bias.

This is a two part question. Accepting appointments on a voluntary basis has the advantage of working with curious, interested and generally excellent teachers. Compulsory participation acquaints many more with program but attitude commitment may be limited, neutral or even negative.

Enthusiasm is lost when something is required.

Do not agree that it should be a separate subject.

I feel that rather than have another subject, it would be better to utilize outdoor education in many subjects.

I favor this approach.

Camping program is required at the 6th grade level at this time. The voluntary integrated approach appeals to me. (The curriculum bag is full) But, of course, limits participation.

Our program has worked well on a voluntary basis.

I believe we should expect all teachers to participate in outdoor education.

It must be <u>real</u> part of the individual teacher's program or it would not be used any longer than if someone were enforcing its use.

This idealistic. The approach I used for 10 years. The good teacher makes use of OE. I now believe most of our teachers need administrative requirement.

All teachers should include outdoor experiences during the year.

An attempt is made to see that all children participate whether staff member does or not.

ITEM V <u>Do you believe that sufficient provisions have been made in the way of providing equipment, library materials, etc., and in making them readily available for teachers and pupils</u>?

1970	: 11	: 14	: 3	: ___	: ___	:
1971	: 9	: 9	: 1	: 2	: ___	:
		High			Low	

Comments:

Van stays in garage most of time - not available to teachers. Could use more equipment so will be available in local school when needed as a teacheable period comes.

It has improved as time want on. This is a critical factor. If it becomes too laborious, teachers get discouraged and give up.

Yes.

No problems until gardening time. Getting soil turned early was a problem.

Too much restriction by Worthington Administration on use of equipment, i.e. the mobile supply room (van) making it difficult for well-qualified persons in Westerville e.g. to use it.

Every reasonalble effort was made to publicize these materaals and pieces of equipment available to them.

If anything this project was over-equipped through the director's desire to use up all available Title III funds.

ITEM VI Do you believe that adequate arrangements have been made so as to have transportation readily and conveniently available when needed?

1970	: 8	: 9	: 4	: 5	: 3	:
1971	: 8	: 6	: 2	: 4	: 1	:
	High				Low	

Comments:

No problem.

Transportation arrangements have been restricted due to bus scheduling restrictions in the local districts.

Until the budget tightening - Definately.

Busses only available during off-run hours and with excessively long advance request.

In Westerville, the levy didn't pass, so we've had no field trips since January.

Yes.

Busing has been a problem.

Yes - much effort locally and at outdoor office.

ITEM VII Do you believe that the facilities available and the land laboratories under development will be adequate and effective or efficient in meeting the objectives and goals of this program and of outdoor education as you know them?

1970 : 9 : 9 : 8 : 1 : ___ :

1971 : 7 : 6 : 6 : 3 : ___ :
Low High

Comments:

Yes - Good areas.

We will need to continue to expand. We cannot rest where we are.

This depends on the subject being studied. You can't suudy a young stream at many places, for example.

Some schools without facilities and areas for study. Some areas being preempted by other interests - buildings, parking, athletics.

With the impetus toward a more total understanding of the environment - No. As a place to study units appropriate to that specific land lab and surrounding area - Yes. To be current it seems imperative to use the broad approach - include all rural, urban, suburban learning-teaching sites.

Too far from home for us. We need our own in our district.

Our land lab facilities are practically nil.

ITEM VIII In your opinion, does this project make economical use of personnel, materials, time, and financial resources?

1970 : 7 : 9 : 8 : 1 : 1 :

1971 : 4 : 11 : 6 : 1 : ___ :
High Low

Comments:

Those who question the affirmative to this are people who have never conducted learning experiences in an outdoor situation.

Now it does (Since Mid-year of 1970-71 school year.)!

Devoted, zealous workers.

Personnel and material are spread too thin.

Some major purchases were made before major objectives were established.

The personnel should come into all buildings several times a year.

Yes.

I do not know anything about the finances.

ITEM IX In your opinion, has there been good communications between the schools, those responsible for this program, and various public groups (civic organizations, lay-citizens, taxpayers, etc.)?

1970	: 3	: 4	: 13	: 4	: 5	:
1971	: 1	: 5	: 5	: 10	: 1	:
	High				Low	

Comments:

Needs improvement!

There has been good communication between schools and program, but I don't know if the taxpayers, etc. know much.

Not always, but lately it has been better.

Not much parental, taxpayer, etc., interchange.

Not as good as it should be. Those who are informed seem to be enthusiastic supporters - but not enough are thus informed. Mostly via camping experience of their children.

This has consistently been a shortcoming. The director was grossly lacking in this area. One staff member initiated nearly all news releases on his own.

ITEM X Based on the reports you have received and your own investigation, does this project appear to be receiving public interest and support?

1970	: 5	: 10	: 9	: 2	:	:
1971	: 3	: 7	: 7	: 3	: 1	:
	High				Low	

Comments:

Resident camp experience was particularly well received.

Public interest and support is high. Administrative interest and support vacillates between weak and none.

In Worthington more so than in Westerville and Grandview. In all - too slowly to survive as intended in the grant application.

Cut at Westerville, never much support in Grandview. Reduced participation in Worthington.

No Complaints.

Parents of campers very favorably impressed.

Yes.

ITEM XI Generally, does this program make sense to you as a taxpayer, citizen, parent, representative of the community, etc.?

1970	: 18	: 8	: 1	:	: 1	:
1971	: 13	: 8	: 1	:	:	:
	High				Low	

Comments:

Plan should be projected for several years in advance so we who go will know what to expect. Every new teacher should be briefed on the progrmm each year.

As a citizen, taxpayer and classroom teacher, I can think of things which our surburban schools need more.

It is rather expensive considering the number served and taking into account other needs.

I am not without bias. I believe it has tremendous potential. We have lived in cubicles too long.

Yes.

One can hope

Has realized many objectives of the original grant and has the potential of being a most relevent approach to teaching and learning.

Outdoor education is tangible, concrete learning.

School age children are quite seriously concerned about the environment and its future. These young people are the prime targets for our programs and seem to be easily motivated in these concerns.

XII Programs like this one include various parts. React to each of the following listed parts of this program: (VG - very good; N - no opinion; P - poor; D - disapprove).

1970 N= 29 1971 N= 22

			Number of replies				
			VG	G	N	P	D
a.	Employment of an outdoor education director, teachers, clerical assistance, etc.	1970	22	4	1		
		1971	14	8			
b.	Publication of: Manual for the Outdoor Teacher	1970	17	11	1		
		1971	14	8			
	The Newsletter	1970	15	11			
		1971	8	12	2		
	Outdoor Study Units	1970	11	11	3	1	
		1971	15	7			
c.	Workshops and orientation sessions to inform teachers of outdoor education, the program, land laboratories, and outdoor teaching techniques.	1970	24	5			
		1971	18	3	1		
d.	The mobile van as a way to make equipment and materials readily available to teachers.	1970	13	11	2	1	2
		1971	8	7	2	4	1
e.	Moving the headquarters of the program to the building on the high school land laboratory site.	1970	20	6	2	1	
		1971	11	5	3	2	
f.	The resident program at the sixth grade level.	1970	15	10	3	1	
		1971	18	2	1		
g.	The land laboratories that have been developed or are in the process.	1970	9	13	3	4	
		1971	7	11	2	2	
h.	The role of outdoor teachers in assisting teachers to prepare, conduct, and follow-up outdoor experiences.	1970	11	11	2	5	
		1971	9	13			
i.	Cooperation between the three school districts in conducting this program.	1970	10	13	5	1	
		1971	2	6	10	3	

			VG	G	N	P	D
j.	Cooperation between the program and other educational agencies (teacher training institutions, etc.)	1970	7	8	8	6	
		1971		10	9	3	
k.	Cooperation between the program, the school, the park districts, and other agencies in jointly planning various programs.	1970	9	11	5	3	
		1971	3	9	8	2	

ITEM XIII - In what ways have your earlier expectations for this program been unrealized and/or exceeded?

Comments:

--- Expected much greater cooperation among the administrators of all three districts.

Expected more physical development of facilities.

Did not expect such favorable support from parents of students involved in the program.

--- The program was presented to us in a fine manner. We could have intensified the program at the local level with a little more effort.

The three man staff was excellent.

--- Program has suffered the last two years from lack of direction and leadership.

I had hoped to gain much in the association with the staff members. Unfortunately I found they had far less training and background than I.

--- Program exceeded expectations in Total Growth (personal and professional) in workshops, in work with primary grades, and materials produced.

Unrealized expectations are lack of public relations for informed support, little contact at secondary level, lack of workable director and staff communications and continuation as a staff in cooperative arrangement.

--- Positive: Teacher interest good, resident program grew too fast, much teacher participation in workshops etc.

Negative: Only one person retained, only one district continuing, land lab development far less than hopes, no use of mobile supply room.

--- I have not yet seen the manual we worked on last year. Lack of transportation has hurt us.

--- I wish there could be more learning experiences provided for the primary youngsters.

--- The sixth grade resident program has been great. Inservice work with teachers has also been especially good.

--- Above expectations.

--- The land lab development was a disappointment.

--- Good workshops. Provided basic knowledge of methods, techniques.

--- Would like to have full week of camping, but most teachers don't want this. Personnel have been terrific in cooperating.

--- Three fulltime people should conduct "more" program than one one-half time former director. Personal ambitions are put ahead of the best interests of tri-district students in some cases.

XIV What specific recommendations do you have to make about this program?

Comments:

--- Closer ties with central OE staff with teachers. Need for evaluation and sharing with the teachers of results of outdoor resident education.

--- Administrative consideration of outdoor education, not as a supplementary frill, but as necessary part of the curriculum. Perhaps consideration of part-time employment of teachers in the three districts as members of the OE staff. This would ensure concern for the children's best educational program first as well as help fit OE into the existing curriculum.

--- Keep it up ---One week of camping (ROE) mandatory at 6th grade. Tree nursery on outdoor education land laboratory.

--- That each school system do their own program.

--- Continue the present program---looking always for ways to improve.

--- Continue it and expand it.

--- Hopefully the program will be continued.

--- More presentations to teachers in own schools.

--- I would like to see it continued but with the financial crisis in Westerville, it's doubtful there. The program is a very good one. They do a fine job.

--- More work in the further development of the OE building as a nature center. More pre-trip materials (A-V) for the units and field trips already created. More public relations.

--- I felt perhaps the staff from the outdoor education office was spread too thin over the three districts.

--- Forget the cooperative effort across school district lines. One district encountering internal problems can adversly affect the whole program in spite of the efforts of the other districts. This program should become independent and contract its program and service to many districts.

--- Continued field experiences - classes away from schools should be continued. Carefully prepared new outdoor work units such as the Terrarium could be extended and additional work units prepared. Cooperative projects could come from community involvement.

INITIATORS' SUMMARY

Generally, this group seemed satisfied with the program and continued to be supportive of it. They expressed much regard for the idea of outdoor education and provided numerous suggestions about ways this program might have functioned differently to enable it to have reached more children and teachers.

Most of these respondents seemed pleased with the job that had been done by the staff, their inservice workshops, the reception given the resident programs, the published materials and many of the other services that had been rendered.

On the other hand, individuals pointed out a variety of weaknesses or negative factors--such as (a) the failure to find a way to effectively use the "van," (b) decisions in one district to cut back field trips, (c) difficulty encountered in arranging for transportation, (d) getting delivery when promised, especially with the garden project, (e) failure to sufficiently develop some of the land laboratories, (f) maintenance of some equipment items and inability to locate other items, (g) the handling of funds--or the availability of funds for some purposes and not for others, (h) the lack of cooperation between the districts with persons in each feeling he was not getting his share or that one or the other of the districts had a better deal, (i) the role and the effect of the former director prior to and subsequent to his resignation at mid-year, (j) the lack of firm commitment to continue on the part of the districts and some administrators with the demoralizing ("holding action") or lame duck effect, and (k) lack of involvement with the high schools, and many, many others.

As one examines the replies of the INITIATORS, he notes a definite gain from one year to the next in the way this groupperceives the value of this program; in regard to (1) the qualifications of the outdoor education staff, (2) the economical use of personnel, materials, funds, etc., (3) the extent to which the program makes sense, (4) the employment of outdoor education staff, (5) the resident program, (6) the role of the outdoor teachers in assisting classroom teachers, and (7) the value of the outdoor study units.

However, there was a loss in the way in which they perceived (1) provisions for making materials available, (2) the adequacy of the facilities and land labs (3) the public interest and support, and (4) cooperation between the districts and between the program and various agencies..

Although the INITIATORS did not comment as extensively this year as they did in 1970, they did provide suggestions for improvement. Generally, they called for the continuance of outdoor education in these schools--if not coordinated by a multi-district program, then coordinated by local district operated programs.

Interestingly, several INITIATORS gave responses that seem to indicate that they were unaware of decisions that had been made about the future of the program and the reasons that were being given for such decisions.

II THE ASSISTEES

The attitudes or positions of the principals and teachers (categorized as the program Assistees) were believed of major importance in Evaluation.

1. Program objectives focused on the development of favorable teacher attitudes about outdoor and conservation education.

2. Antecedent to the use of the project and outdoor or conservation experiences are favorable attitudes toward them. If principals or teachers are negative and see the project and experiences of little value, neither will be used.

3. The program was considered a service to teachers and administrators to assist them in meeting the schools' educational objectives, particularly in conservation and outdoor education. Hence, they were among the best qualified to render decisions about it and its impact upon them and their students.

Instruments were constructed to solicit information from persons in this group in regard to the project and their perceptions of change in their students. In addition to the instruments, a personal interview was conducted in all three school districts to aid in determining the reaction of the Assistees. The opinions gained through these interviews will be expressed throughout the following section.

Principals

The Principals' Evaluation Opinionnaire (see Appendix A for tabulation) was completed by eighteen, of the principals in 1971 compared with sixteen in 1970.

The respondents as a group appeared to have a positive reaction toward outdoor education and outdoor experiences. Fifty percent or more checked one of the two highest columns regarding the importance of outdoor education on five of the six areas: (1) concept formation, (2) to develop concerns about environment, (3) to clarify understanding, (5) as a change of pace, and (6) as a motivating experience. Only one area, (4) to improve social relationships, received less than a majority of high ratings. The highest ranking area was (2) to develop concerns about the environment, and (6) as a motivating experience received the next highest ranking. In reviewing the rankings for 1970 and 1971 and the impressions received from interviews, there seemed to be in 1971 a greater tendency on the part of the principals to take more a middle of the road ranking (third place on a scale of five).

The principals checked few deterrents as having "high" importance to the teacher's use of the outdoors. Again, the center ranking (third place on a scale of five) showed the greatest increase. The items receiving a "low" ranking as a deterrent were: "restrictive school policies", "negative attitudes by peers", "liability concerns", "lack of suitable sites or apperatus" and "teacher's lack of ability to handle a large group of children outdoors". "Scheduling difficulties" seemed to be more a deterrent in 1971 than they were in 1970. The responding principals indicated that the two most important deterrents were those of "lack of understanding about the outdoors" and a "lack of time with too much to cover." In a review of the figures for 1970 and 1971, along with opinions expressed in interviews, the latter two deterrents are gradually reversing to the middle and low side of ranking concerns.

Regarding the Tri-District Project the responding principals generally approved of the project. Seventeen principals "strongly agreed" (or "agreed") with the statement that "The workshops, institutes, etc. were an important step" and that "We should continue to develop our land laboratories, making them more available and useful to teachers and children." In the interviews the opinion was expressed that greater care to maintain the land laboratories was needed.

Thirteen of the principals agreed (or strongly agreed) with the statements: "Efforts to inform teachers of the services available to them through the program were adequate", "Publications are useful and needed", and "The program seemed to be gaining the acceptance of the teachers."

Eleven of the respondents agreed (or strongly agreed) with the statements that "Generally the public is aware of the program" and that "The facilities now housing the program appear adequate." Of extreme importance was the response to the statement, "In my opinion, this is a worthwhile program and one that should be continued even after federal funding is discontinued." Seven principals strongly agreed, five agreed, one had no opinion, one disagreed and one strongly disagreed.

The interviews with the administrative staff indicated a general approval for continuing the program if the school districts concerned could afford the additional expense. The school principals also indicated that the existing practice of having the outdoor personnel come into the schools on a regular basis was of great value in preplanning, scheduling and gaining general awareness to the program. A general feeling of support was expressed by the administration for some or all forms of the program. This would indicate a consistency with the opinionnaire that there is support to the program at the administrative level.

Teachers

In March of 1971, as in 1970, a Teachers' Evaluation Opinionnaire was sent to a sample of elementary and secondary teachers

to learn: (1) the importance attached to conservation and outdoor education, (2) what were believed to be the deterrents to the use of the outdoors and land laboratories, (3) attitudes about aspects of the project and (4) opinions about continuing the project. (See Appendix B and C for tabulations.) Sixty-seven of the elementary teachers and thirty-three of the secondary teachers in the sample responded. The completed instruments were anonymously returned to the evaluator by mail.

An interview also was conducted with a sample of the teachers being selected in each of the districts involved in the project. The opinions expressed wn these interviews will be given thoughout the following section.

(1) Value of Outdoor Education and Outdoor Experiences. Few of the teachers that replied to the opinnionaire attached a low importance to outdoor education and outdoor experiences for any of the listed areas: (1) concept formation, (2) to develop concerns about environment, (3) to clarify understandings, (4) to improve social relationships, (5) as a change of pace, or (6) as a motivating experience. In both the elementary and secondary teacher returns almost all of the six areas received a stronger rating in 1971 than they did in 1970. The only areas that showed a slight decrease were the items, "motivating experience" and "improvement of social relationships," which were decreased on the secondary teachers' opinionnaire.

In the interviews with the elementary teachers there was a strong backing for the values gained by outdoor experiences. The ability for children to discover new areas of study as well as new levels of competency within the students also was expressed by the teachers.

(2) Deterrents. Determining what teachers perceived as deterring them from using the outdoors and land laboratories was believed to be an indicator in evaluation and of value to the project personnel. Thought to be the least important of the items listed (see Appendix B and C) were: (1) negative attitudes by supervisors and peers, (2) my own inability to handle large groups outdoors, and (3) liability concerns", ranked in this order. The most important deterrents listed were: (1) scheduling difficulties and (2) lack of time with too much to cover.

All of the eight areas listed showed signs of improvement in 1971 (except the scheduling problem) in that a higher percent of the teachers were checking the low end of the scale for the areas. The greater emphasis by the project personnel toward getting elementary teachers directly involved in the project had a positive effect which shows up as an increasingly low rating (see Appendix C) in (1) my own lack of understanding about the out-of-doors and (2) lack of time with too much to cover. The high school teachers still feel a concern regarding "too much to cover in too little time", the scheduling problem and a resistant school policy.

In interviewing, the K-6 teachers indicated that on-the-school-site workshops would be of great value. The idea of having the outdoor education personnel in the school in a regular schedule was very well received. The teachers indicated that more preplanning could go into the preparation for the sixth grade resident experience by the outdoor education staff. However, in interviewing the teachers, a positive picture was painted for the program and a genuine hope that some form of outdoor education and outdoor experiences could be continued. The teachers seemed to feel that they would use the program more and more as they become more comfortable with this method of instruction.

Some of the unsolicited comments on the opinionnaire, which have not previoully been expressed in this evaluation, were:

1. Need for in-depth workshops which are well planned and geared for various grade levels.

2. Development of different activities for various grade levels.

3. Need for constant effort in maintrnance and development of land laboratories.

4. Need for a program designed for the high school level.

5. Monthly checklist of activities which could be carried on in that month.

6. Promptness on the part of resource personnel.

(3) Tri-District Outdoor Education. Eight statements were made on the opinionnaire about aspects of the Tri-District programs (see Appendix B and C). The teachers responded by checking: (1) strongly agree, (2) agree, (3) no opinion, (4) disagree, or (5) strongly disagree.

Ninety-three percent of the teachers agreed (choices 1 or 2) that "workshops, and other efforts of the outdoor education staff to familiarize teachers with the out-of-doors and outdoor teaching approaches appear to be an important step in the right direction." Only three percent disagreed. The percentages were based upon the number of opinionnaires returned; some persons did not respond to all items.

Seventy-five percent indicated that "the publications (curriculum guides and resource guides, . . .) of the type being produced by program personnel are useful and needed." Eight percent disagreed or strongly disagreed. Fifty-four percent of the respondents agreed with the statement that "the facility now housing the outdoor education program appears adequate and likely to increase the program's impact." Seven percent disagreed, and thirty-eight percent checked "no opinion."

Ninety-three percent of the respondents agreed with "we should continue to develop our land laboratories, making them more available and useful to teachers and children." About one percent of the

respondents disagree, and six percent had no opinion. Efforts to inform teachers of the services available to them through the program have been adequate according to nearly sixty percent of the teachers. Not so, according to twenty-four percent who either disagreed or strongly disagreed.

Sixty-two percent said "this program seems to be gaining the acceptance of the teachers generally." Six percent either disagreed or strongly disagreed. More than thirty percent had no opinion. With "generally, the public is aware of the program and supportive", twenty five percent said yes, forty percent checked no opinion, and twenty-five percent either disagreed or strongly disagreed.

Of extreme importance, in the Evaluator's judgement, were responses to the item "in my opinion, this is a worthwhile program and one that should be continued even after federal funding is discontinued." Forty-five of the elementary teachers agreed or strongly agreed, three had no opinion, and five disagreed. At the high school level, thirty-one gave their approval, two had no opinion, and two disagreed.

In order to supplement the data obtained from the Teachers' Evaluation Opinionnaire, the outdoor education staff (at the suggestion of the Evaluator) constructed an instrument called the Outdoor Education Teachers' View to obtain the reaction of teachers known to be using the outdoors and the project. The percent response to the items is given for both years, 1970 and 1971, in Appendix D.

Summary

Some comments expressed in several of the interviews that were general in nature and took in the total program follow:

1. In the final year of federal funding of the program, if the director had spent more time "selling" the program, the program might have survived as originally planned.

2. The outdoor personnel still need to go out to the teachers and "sell" the program.

3. More inservice work needs to be done.

4. A sharing of equipment between all three districts might hold together the Tri-District concept and possibly start a new program, with strong leadership.

5. A committee should be formed to aid in administering the program as well as in developing new materials to help generate the feeling among the teachers that this is their program.

6. Better publicity (e.g. pictures in the local media showing children involved in the program) would help the program.

7. The present personnel do a fine job of covering the large demands that are placed upon the two of them.

8. The resident program is felt by most people to be of great value and should be continued.

9. Some local people other than teachers and administrators expressed the feeling that the outdoor education program should be continued.

In review of the statistics and personal interviews, there seems to be high regard for the program by both teachers and administrators, for the most part. Some of the problems which existed last year at this time seem to have been corrected. Naturally, there are some new problems since the federal funds have been discontinued. The local people contacted feel that the outdoor education program should be continued, if not jointly among the districts, then certainly singly within each district. In general, the attitudes toward outdoor education and the outdoor experiences seem to be positive.

Inservice training. Perhaps there was no phase of Tri-District (or of any outdoor-conservation project of this nature) more critical than that of its program to provide teachers with the knowledge, skills, attitudes, and competencies needed to work in the field and in the land laboratories. Although the staff could work with children from time to time and help to resource teachers wanting special assistance, the real impact depended upon the inservice program.

This program was designed to help to (1) familiarize teachers with the program and its services, (20 increase their ecological understandings and understandings of outdoor and conservation education, (3) change attitudes, and (4) provide know how. Interviews with persons associated with the project disclosed that the inservice program was successful with respect to the teachers it reached, and that the impact of this program would last longest. One administrator commented, "We now have a cadre of interested teachers who can work outside the classroom."

However, teachers continued to point to their lack of understanding of the out-of-doors as a primary deterrant for not going outdoors (Appendices A, B, and C.)

Among the major formalized efforts in the inservice area during the 1970-71 school year were:

Organization of a graduate level workshop in environmental education through the School of Natural Resources at Ohio State University that met at the outdoor education center.

A summer workshop extending over a one week period in which thirty-three Tri-District teachers participated.

Several "week-end" workshops during the year in which participants were provided some released time either on Thursday or Friday of the week to permit them to attend.

An Evaluation Opinionnaire: Outdoor Education Workshops was used with all workshop participants, and in additional summer workshop opinionnaire devised by project staff was used to ascertain the strengths and/or weakness of that particular workshop.

Summer Workshop. Appendix E_1 contains a percentage tabulation of the replies of the 33 participants of the summer workshop. Note that four-fifths or more of the participants agreed with the statements.

The workshop content correlated with the pre-registration material I received.

I learned to use equipment with which I had no previous experience.

As a result of the workshop I have more confidence in conducting outdoor activities.

The equipment and teaching materials were adequately demonstrated.

The daily schedule was closely followed.

An examination of the individual opinionnaire reveals that only one or two of the participants was decidedly negative in general after the workshop. Only one person strongly disagreed with the statcment "Workshops like this should be available to others in the future." In fact, 31 of the participants agreed or strongly agreed with the statement.

Some strengthening, perhaps, could have been done as indicated by responses to items:

The workshop introduced me to outdoor study units which I have used with my class.

Because of the workshop I have contacted the Tri-District Outdoor Education office for assistance.

Outdoor education is a teaching technique for science.

There was sufficient opportunity for individual participation in outdoor activities.

Workshops in general. Seventy of the teachers who participated in workshops conducted during the year completed an evaluative questionnaire in May, 1971. Their responses may be found in Appendix E_2.

An exceedingly high number of these participants (55 or more checking the positive two columns) said that (1) they learned much, (2) the subject matter, methods and skills will be very useful, (3) the instructors were always well informed and had excellent knowledge of the subject, and (4) the subject matter was up to date, etc. etc.

Some teachers felt the workshops in which they participated were really for beginners and would have preferred workshops in depth in a particular area. Forty-six of the seventy said the workshop in which they participated should be required for elementary teachers. Twenty-nine said it should be required of secondary teachers; but a few others said it should be dropped. Only a few said they were not interested in another workshop.

Several persons said that their attitude toward the "esthetic value and educational value of outdoor education" was unchanged as a result of the workshop. They pointed out that their attitude was OK in the first place--this was the reason they were there in the first place.

Items selected randomly from replies to the open ended questions provided further insight into their reactions to components of the program (Appendix E_2). Participants identified the phases of the workshop they thought most beneficial, least valuable, indicated areas in which they "could use" in-depth workshops and provided comments and suggestions. Persons in Tri-District schools considering similar workshops in the future should check these responses.

Summary. Inservice Training. In previous evaluative reports, the inservice training program was seen as one of the most significant challenges and opportunities for the project and thought to be one of the most important services it could render. In the third year, this continued to appear to be true.

However, in a voluntary program, and even if reimbursements and various types of inducements are provided, the persons participating are often the ones needing the work the least. Although the workshops may have reached many of the new, the curious, and the uninformed, it probably did not reach those with negative attitudes and those unwilling to deviate from their traditional course material and the classroom approaches in which they felt most secure. The Evaluator sees no solution for this problem in programs in which services are provided on a voluntary basis to teachers when those responsible for the implementation of the program are in staff positions and not in the chain of command. The answer, according to Hug, is to place those responsible for the program in a line position rather than a staff position.[7]

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[7] *Personal letter from John Hug, April 21, 1971, to Evaluator in response to evaluation questionnaire. Hug was one of the original consultants largely responsible for the origination of the Tri-District program. He is now Director of Bear Run Nature Reserve. A project of Western Pennsylvania Conservancy.*

III RECIPIENTS

An important component in the evaluation of any educational program is its impact on the children or the recipients. In many cases this impact has been difficult to identify or to measure and evaluators have had to rely upon test scores or upon the perceptions of teachers, parents, and the children as to the impact. Furthermore, programs of conservation and outdoor education such as Tri-District focus upon interests, attitudes, and appreciations rather than the acquisition of specific information or memorization of "facts." As yet, we lack satisfactory tests with which to measure outcomes in the affective areas such as these.

Nevertheless, in this phase of the Evaluation--the impact of the program on the RECIPIENTS--the following were utilized:

1. The INVENTORY OF ATTITUDES, INTERESTS AND APPRECIATIONS and the INTEREST INVENTORY were administered to a sampling of Tri-District students in the spring of 1969 and again in the spring of 1970.

2. Children, parents, and teachers were asked to react to the program--particularily the resident experience--and the impact they perceived it to have on the children.

Testing of Pupils

The Evaluator has worked for several years with two instruments, The Inventory of Attitudes, Interests and Appreciations and the Interest Inventory (See Appendix F) in an attempt to develop an instrument that will identify changes in (1) the scientific attitude, (2) appreciation of science and nature, (3) certain science skills, and (4) interests in science, the out-of-doors and the environment.[8] These instruments, inadequate as they were, were administered to several groups of Tri-District children on a before camp--after camp basis, and to several hundred other children, some in schools actively participating in conservation--outdoor education and some in schools participating very little. This was done both in the spring of 1969 and 1970.

The purpose was to learn if change occurred (as measured or identified by these instruments) as a result of the camping experience,

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[8] *Malcolm D. Swan, "Science Achievement as it Relates to Science Curricula and Programs at the Sixth Grade Level in Montana Public Schools," Journal of Research in Science Teaching, 4:2 October, 1966), 112-23; and "Evaluation", Continuation Grant for a School Community Outdoor Education Project, Crystal Lake, Ill.: Crystal Lake Schools, District No. 47, 1968, 3-74.*

as a result of involvement with the project, or in the schools from one year to the next.

Before and After the Resident Program. In May of 1969, Teachers administered the instruments to four classes of children (N=124) about one week before the camping experience and again upon return to the classroom. In May, and June 1970, the tests were administered on a similar basis to children (N=196) from the Stevenson, Hanby and Edison schools. The Edison children were fifth graders, whereas the Stevenson and Hanby children were sixth graders.

The mean subscores--Scientific attitude (SA), Appreciations (App), Interests (Int.), Experiences (Exp.), Interest Direction (ID) and total scores are provided in Table I. Note that in both 1969 and 1970 that students appeared to score higher on the SA, App., and Exp. items following their camp experience than before it. In 1970, they appeared to score higher on all areas of the post test. In both 1969 and 1970 they appeared to have their highest total scores after camp.

A "t" test was applied for significance to the total scores for the two years. The apparent difference the first year of 1.41 (63.84 - 62.43) was not significant. The difference appearing to exist in the 1970 testing (64.56 - 61.03) however, was significant at the .05 level of confidence (t = 2.26) and approached the .01 level. (After: ΣX^2 = 868,384; Before ΣX^2 = 771,661) A t of 2.58 is required for the .01 level of confidence.

Substantially more children (10 or more of the 124 in 1969; 15 or more of the 196 in 1970) answered these items correctly on the post-test than they did on the pre-test:

Part I - Inventory of Attitudes, Interests and Appreciations
Both 1969 and 1970

When a bad man gets sick or ill, he is getting just what he deserves.

We can't predict anything about nature from the results we get when we do an experiment.

We have few problems that scientists cannot solve.

It is very difficult for scientists to find new problems to work on.

I like to look for things and learn what I can about them outside when there is lots of snow on the ground.

I would rather write a story or draw a picture of something outside in nature than a building or something that men have constructed.

TABLE I

MEAN SCORES OF CHILDREN IN TRI-DISTRICT SCHOOLS ON THE INVENTORY OF SCIENCE ATTITUDES, INTERESTS AND APPRECIATIONS AND THE INTEREST INVENTORY BEFORE AND AFTER CAMP; May, 1969 and May, 1970.

	S.A.	App.	Int.	Exp.	I.T.	Total
1969-Before Camp N = 124	11.43	14.32	10.31	13.51	12.76	62.43
1969-After Camp	12.49	14.93	9.95	14.50	11.97	63.84
1970-Before Camp N = 196	13.56	14.12	9.94	11.73	11.66	61.03
1970-After Camp	13.80	15.06	10.40	13.25	11.94	64.56

1969 only

I don't see much sense in doing extra work when the teacher doesn't give me extra credit for it.

Scientists have discovered and named all the plants and animals.

1970 only

I have to travel a long distance to find beautiful things to look at that interest me.

I don't think this country is as nice a place in which to live as it was when the colonists lived here.

I would rather watch TV than play outside.

We take field trips mostly to get away from school, and we really don't learn much when on them.

Part II - Inventory of Attitudes, Interest and Appreciations

Both 1969 and 1970

Recorded the out-of-doors temperature at several intervals during the day.

Dissected an animal specimen to study its internal parts.

Used a Centigrade Scale thermometer to measure temperature.

Tested the hardness of several rocks to see which was hardest.

Looked at the eye of an insect through a magnifying lens.

Found a fossil for myself.

1969 only

Grown mold on a piece of moist bread or similar materials.

Examined the underside of a leaf under a microscope to find the stoma.

Watched protozoa or other one-celled animals through a microscope.

Looked at blood cells through a microscope.

Located the Big Dipper or North Star or any other constellation.

1970 only

Seen a bird and later found its name.
Predicted what the weather would be like the next day and been right.

Substantially fewer children (10 or more of the 124 in 1969; 15 or more of the 196 in 1970) answered these items correctly on the post test than on the pre test:

Part I - Inventory of Science Attitudes, Interests and Appreciations

I think it is very interesting to study live animals and specimens (both 1969 and 1970).

I like to study about the weather and try to predict when it will rain or snow (1970 only).

I like to think about problems concerning how the earth and stars came about and how they were formed (1970 only).

I usually get a lower grade than I deserve (1969).

On the items of the INTEREST INVENTORY, in both 1969 and 1970 there was increased interest in READING MAPS, LISTENING TO STORIES AND SINGING SONGS following the camping experience. There was also a decreased interest in PLAYING CARDS. In addition, in 1970 there was a decreased interest in COLLECTING SUCH THINGS AS STAMPS, COINS, BASEBALL CARDS, ETC. and in LOOKING AT LIVE ANIMALS AND SPECIMENS.

In interpreting these before and after results, readers must keep in mind that these instruments are not considered foolproof and do not necessarily measure what they purport to measure. Although they have been used in a number of resident outdoor education programs on a before and after basis with similar results to those reported above, they are thought to be indicators of only one facet of the outcomes of such programs. A variety of outher outcomes are claimed for such programs which these instruments make no claim to measure.

A consistency has been noted, however, in the way that children tend to respond to certain items after resident programs. Apparently certain curiosities exist before resident programs that are satisfied or saturated fully through the camp experience with a loss in the interest score taking place. It should be noted that the apparent difference in Total Score in 1970 of 3.53 is somewhat larger than is usually obtained on a pre and post test basis with resident programs.

Other use of the IAIA and II. The same instruments, the Inventory of Attitudes, Interests and Appreciations and the Interest Inventory were administered also to groups of children in schools and situations in the Tri-District area other than on a before and after camp basis in both 1969 and 1970.

Table II contains the mean scores and subscores for the phase of this testing done in May, 1970. No analysis or intrepretation of these scores appears possible except by persons with full knowledge of the schools and students in these districts. Matching the scores of children in one school with those in another would be questionable without knowing about other factors that might be related to the results more closely than outdoor education activity--such as economic and social conditions.

It is interesting to note, however, that students in this group who were tested following a camping experience scored very closely to the students in the Before-After Camp study in their post test. Furthermore, when the mean score (Total score) was obtained for all non campers, it was nearly the same as the mean score obtained for campers on their pre-test.

Unknown and untested by these instruments is the impact of field trips and short term outdoor experiences on pupils' test scores. Perhaps persons fully acquainted with the schools that were studied may perceive some difference. The Evaluator did not see any. However, when the mean of all scores (Total Score) for 1969 were compared to all those of 1970; (1970 - $\bar{X}$ = 63.27 ; 1969 - $\bar{X}$ = 61.22). If this were a true difference, one would have to wonder about the portion of this difference that could be attributed to the program.

TABLE II

SCORES OF CHILDREN IN TRI-DISTRICT SCHOOLS ON THE INVENTORY OF SCIENCE ATTITUDES, INTERESTS AND APPRECIATIONS AND THE INTEREST INVENTORY OTHER THAN ON A BEFORE AND AFTER CAMP BASIS. May, 1970

School	S.A.	App.	Int.	Exp.	I.T.	TOTAL
Annex (Worthington) sixth graders. Test one week after camp. (N = 98)	14.04	14.91	9.17	12.91	12.16	63.20
Cherrington (Westerville) sixth graders - moderate outdoor activity (N = 50) No. ROE.	13.70	15.34	10.80	13.48	12.28	65.44
Wilson Hill (Worthington) sixth graders. Extensive daily outdoor activity during year. No ROE. (N = 83)	12.32	13.00	9.08	14.31	11.95	60.81
Edison (Grandview) sixth graders. ROE as 5th graders. No OE during school year. (N = 69)	13.49	14.04	8.30	11.78	11.40	59.24
Hanby (Westerville) sixth graders (camp previous fall) (N = 49).	13.24	14.30	11.42	13.24	12.16	64.65

Values of Outdoor Education as Perceived by Children

As important, perhaps, as scores on tests and inventories, in the analysis of the impact of a program are the perceptions of the children or RECIPIENTS about the value of the experience. Hence, in the spring of both 1970 and 1971 a sample of the children having a resident outdoor education experience were asked to complete a ROE student opinionnaire. Other children were asked to respond to a series of questions relating to the outdoors and outdoor phenomena.

Resident Outdoor Education. Appendix G. contains a tabulation of childrens' responses to the items on the Resident Outdoor Education Student Opinionnaire. Note that this instrument contained items that fell generally into the areas of (1) social relationships, (2) other outcomes, (3) needs, and (4) likes and dislikes.

Social Relationships (Items 4, 5, 8, 9, 11, and 20).

A large fraction (two-thirds or more of the children responded "Yes" to items such as:

I learned something about my classmates that helped me to know them better.

I know my teacher better this year than I have known my other teachers in past years.

I made new friends while at camp.

I learned some new manners while at camp.

In 1970 there were 191 replies to these items. In 1971 there were 248 replies. Apparently these children believed that they had made new friends and that the experience had helped them to understand and to get along better with the teacher and classmates during the remainder of the school year (A strong argument for FALL camping). It should be noted, however, that the "yes" items to these items dropped in 1971 as compared to 1970, but were still relatively high.

In both 1970 and 1971, nearly all said that they had received fair treatment and that the discipline at camp was reasonable. Nearly all said they liked the college or high school student helpers. Most of them said they liked their teachers more after camp than before.

Other Outcomes. Most of the children (both in 1970 and 1971) felt they had learned more about taking care of themselves at camp. Many (nearly 90 percent in 1970) recalled that they studied things in the classroom that related to their camp activities. Only a few indicated a distaste for their discovery groups, for the stream and pond study, etc. Many students listed items on the open end question regarding what they felt they had learned in addition to those listed on the questionnaire. The things they pointed out related largely to first hand experiences with things about which they were studying and the motivational effect of such experiences. Nearly all the children responded "Yes" to the item "We should preserve the outdoors in the future."

Needs, Apparently the children's physical needs were met more satisfactorily by the program in 1970 than in 1969. Perhaps the weather was as much a factor as anything, but there was little said in the most recent survey about the lack of heat, warm cabins, etc. Substantially more of the children thought that their "groups" benefitted because of their participation in 1970 than in 1969. About three-fourths of the

children said that they "felt at home in class" and thought the discipline to be reasonable. Nearly all agreed that there was enough equipment. Each year over 90 percent endorsed the food.

Likes and Dislikes. Through some error, items relating to sleeping quarters and restroom facilities were omitted from the instrument used in 1970. These were the most severely criticized items the year before, and it might have been interesting to know their attitude the latest year.

Generally, the children endorsed their experience, however, with only a few indicating a dislike for a particular activity or situation. Perhaps the least liked activities each of the two years were story telling, skits, and soils study. Even here, four out of five indicated a liking for these activities.

Summary. From the children's standpoint, the camp experience was a success, and one which they believed to be important. Only a few were critical of specific factors in 1969, and even fewer were critical in 1970.

Children's Perceptions of the Value of Short-Term Experiences.

The "test" called "Questions for Boys and Girls Who Have Had Experiences in the Outdoors was administered in 1970 to sample of children (N = 134) having had a number of outdoor experiences and to a control group of children (N = 71) who had not outdoor experiences that year to learn if children in these two groups responded differently. In 1971 this instrument was administered to a group of 143 youngsters who had received outdoor experiences. Appendix H contains a percentage tabulation of the responses to the items on this instrument.

Although most of the items dealt with specific facts relating to the natural sciences, some were thought to indicate the presence or absence of a "conservation ethic." Nearly 90 percent of the children recognized the purpose of the land laboratories as being a place to study nature. Nearly 80 percent of them (both 1969 and 1970) answered false to the items:

2. There are more different kinds of birds here in the winter than in the spring.

5. We should clean up our own litter but not anyone elses.

6. Wild flowers belong to everyone so we can pick them if we want to.

15. We don't feel any colder outdoors when the wind is blowing than when it isn't.

18. Groundhogs are the only thing that hibernates around here.

More of the children in the outdoor group (combination of the two years) answered these items correctly than those in the "non-outdoor" group. (Chi-square .05).

4. "Jack Frost" causes the leaves of the trees to change color in the fall.

7. It is O.K. to shout and make all the noise we want to when we are out in the woods.

18. Groundhogs are the only thing that hibernates around here.[9]

In all, children in the non-outdoor group answered 71 percent of the items correctly. Seventy eight percent of the items were answered correctly by the outdoor group in both 1969 and 1970.

As they did in 1969, children in 1970 listed a variety of liked experiences such as visiting quarries, study of trees, birds, archelogical hunts, etc. A number of children complained that they had several scheduled trips cancelled because of the weather.

Values as Perceived by parents

Resident Experiences. It is doubtful if any program exists in Tri-District schools that could receive a higher and more enthusiastic endorsement from parents of participating children than that given by the parents who completed the Parents Opinionnaire: Resident Outdoor Education. This phase of the program appears to have captured the imagination of the parents--and many expressed ire that decisions were being made to discontinue or cut back the program.

This conclusion was drawn as a result of an examination of some 384 parent opinionnaires given in connection with the camping program of 1969 and the fall of 1970. Appendix I contains a percentage tabulation of parent responses to the opinionnaire items.

Although there was little difference between the responses given in 1969 and in 1970, some slight reduction was noted in the percentage of yes answers in the more recent survey on items:

My child is better acquainted with his teacher this year than he has been with teachers in the past.

I feel that I have an understanding of what Outdoor Education is.

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[9] *Continuation Grant Application for Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education. Worthington Exempted Village School District, Worthington, Ohio, July 1970, p. 50-51.*

My child made new friends while at Camp Ohio.

Hence, one is forced to conclude that the parents saw the same values in the fall camping of 1970 that they saw in the previous year.

As to their endorsement of the program (Part II) in 1970, the preparatory phases received a lower rating than in 1969. The equipment and facilities received a higher rating, the discipline a lower rating, and the extent to which parents were kept informed received a lower rating. However, 79 percent (72 percent in 1969) voted the total program "Excellent." Eighty-six percent (82 percent in 1969) checked "Definitely" to the question "How strongly would you endorse such an experience for all children at some time during their school career." Each year, only two or three persons said "Not at all."

Several pages of comments were compiled from the opinionnaires relating to the values seen by parents and their suggestions for improving the program. In general, these were highly supportive of the program and related to specific outcomes such as social values and working with items in their natural environment. Several parents expressed the wish that other children might attend and that the program be extended for a longer period--to a week or more. Several were critical of action taken appearing to cut into this program the spring of 1971 or in subsequent years.

Values of Short Term Experiences: Parent's Perceptions. To obtain a "parents' reaction" to the short term or field trip experiences and the use of the land laboratories a Parent's Opinionnaire on Outdoor Education was developed and used with a sample of parents each year. No attempt was made to get a "representative sample," the questionnaires merely being provided to several teachers to send home with their children for completion. In 1970, seventy replies were obtained and in 1971, seventy-seven replies were obtained. One may find a tabulation of their replies in Appendix J.

All but a few of the parents reported that their child had reported on one or more outdoor activities (A few who answered NO wanted to know why their child had not received such experiences). They reported that their children were enthusiastic about their outdoor experiences, and two-thirds of them had seen news items relating to the experiences in the newspapers, and nearly three-fourths indicated they did not think a child could learn more indoors in a given period of time than outdoors.

The key item was "I am in favor of outdoor education in our school system and would like to have it continued." Every respondent in 1970 said YES. In 1971, only one (out of seventy-seven who replied) said NO. All others said YES.

Three questions were added to the opinionnaire in 1971 that were not used in 1970. They were:

I think OE activities are frivolous and sould be eliminated from the curriculum (76 said NO, 1 said YES).

In my opinion outdoor education experiences can be important in helping us to solve some of our environmental problems (74 said YES, 2 said NO, 1 was undecided).

I believe that children can learn many things of importance through outdoor education that they cannot learn in the classroom (74 said YES, 2 said NO, 1 was undecided).

Admittedly these replies are not of sufficient number to provide more than an indication of the way in which parents view the outdoor and conservation experiences provided their children. It is difficult to conceive, however, of a lack of support for this kind of activity on the part of parents in the face of these few returns. It would seem almost impossible to find a sample so biased as to give nearly 100 percent support to a program, unless the total group strongly leaned in this direction.

Values for Children as Perceived by Teachers.

Resident Experiences. The teachers who went with the children to camp were asked to provide their perceptions of the values of this experience each year. In 1970 eight teachers were asked to complete the teacher opinionnaire. In 1971, eleven teachers responded. A tabulation of their replies may be found in Appendix K.

All of them responded "Yes" to these items:

1. I feel that my students had an opportunity to develop some responsibility while at camp.

6. I feel that I have an understanding of what outdoor education is.

8. My students talked freely about their experiences at camp.

14. We should preserve the outdoors in the future.

17. Staff responsibilities were divided fairly.

Seventy percent or more each year felt that their childrens' social relationships were improved as a result (indicated by responses to items 2, 4, 7, 8, 10, and 11, Appendix K.)

A weakness, perhaps, is the lack of correlation in what was done at camp and what was done in the classroom. Only one teacher said there was good correlation in 1969, and only six of the eleven said this was true in 1970.

Generally, these teachers pointed to few problems at camp. Some problems apparently existed with some high school students, reinforcing concerns about the careful selection and orientation of students used in the program. Although there appears to have been some equipment problems, the teachers had little about which to complain.

Teacher responses on Part II of the opinionnaire were similar to the responses given by the parents. Although some teachers were not as well prepared as they wanted, all but one tended to check the far left hand or most positive columns.

As to rating the ROE program, in 1970 three checked the "Excellent" column and five checked the second column. In 1971, three checked the "Excellent" column and six checked the second column. Seven of the teachers would "Definitely" endorse such an experience for all children in 1971, two checked the second column, whereas two would not provide much support.

The comments of these teachers were thought particularly important, hence, some are provided below. The teacher comments of the previous year may be found in the 1970 evaluative report.

What do you think you and your class got at Camp Ohio that you could not have gotten in the normal school situation?

1. Living together for three days--the responsibility, interaction, socialization of each had a great effect on each child. This could not be accomplished furing a "day" camp.

2. Stream activities--full day fellowship, responsibility, forced group living, invormal groupings (i.e. campfire, talent shows, etc.)

3. Living together--learning many things about outdoors--genuine appreciation for outdoors.

4. We established an understanding of each other. Learned to accept responsibility. Perhaps feel more comfortable outside.

5. A chance to learn first hand instead of through books. Poison ivy.

6. Exposure to a long period of togetherness. Exposure to large group of strangers. Had to adjust.

7. Many personal relationships with staff and students.

8. Learning through experience of doing and living in a natural environment. Discovering animals and plants in their natural habitat.

Perception of Values of Short Term Experiences by Teachers. Refer to the Assistees section for an analysis of the values of short-term experiences as perceived by teachers known to be providing such experiences.

CHAPTER III

SUMMARY - CONCLUSIONS - RECOMMENDATIONS - EPILOGUE

The objectives originally set forth for the project were to "increase the quantity and effectiveness of conservation and outdoor education, to develop facilities for such education, and to develop intra-district cooperation for the improvement of education."[10] Specific objectives as summarized by Monaghan were (1) physical facilities, (2) teacher involvement, and (3) public support (assuming the conservation and evaluation aspects to be implicit in the educational objectives).[11]

As indicated earlier, Tri-District's program shifted during the second year to focus on helping teachers provide conservation and outdoor education experiences. In doing so, project personnel expected to reach the objectives set forth above, and ultimately lead to a concerned citizenry knowledgeable and appreciative of the out-of-doors and environmental needs.

The Tri-District project attempted to meet this challenge by:

a. developing and maintaining land laboratories, outdoor teaching sites, and a program headquarters or center.

b. acquiring, maintaining and distributing apparatus, equipment, and materials for conservation and outdoor education.

c. developing and disseminating teaching materials, resource units, etc.

d. providing programs of inservice training for teachers in the areas of conservation, outdoor and/or environmental education.

e. assisting teachers to plan, conduct, and follow-up outdoor experiences.

f. organizing and administering a program of resident outdoor education for 5th and 6th graders.

g. intra-district and agency cooperation in the development of school and public concern for conservation and environment.

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[10] *Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education, Worthington, Ohio, Worthington Public Schools, 1967.*

[11] *First Continuation Grant Application for Tri-District Cooperative Development of Land Laboratories for Conservation and Outdoor Education, Worthington, Ohio. Worthington School District, 1969, p. 2.*

E 43.

The approaches to evaluation were set forth in earlier pages. In addition to the data in Chapter II, the Evaluator and his colleague, Mr. Seim, made an on-site examination and interviewed teachers, administrators, and project personnel at length. Their findings and conclusions are summarized below:

SUMMARY

Developing and maintaining land laboratories, outdoor teaching sites, and a program headquarters or center.

The headquarters. The project headquarters in Worthington was recognized as a major step forward last year. Since then much work has been done to make it a more usable facility, but more could have been done or needs doing. Although this facility should not be museum-like, it should be attractive, be warm and inviting in appearance, and contain a variety of displays and the like. Substantial progress was made here during the year.

The headquarters location on one of the older well established land laboratories is appropriate and convenient for the educational program. However, its location may have contributed to the feeling of persons in Westerville and Grandview that Tri-District was really not their program--but that it was a Worthington program.

The land labs. Although major emphasis was placed on the development of land laboratories the first year, little attention has been given to them since that time. Although the Evaluator agreed with this shift in emphasis, he was disturbed at the lack of care. These facilities require maintenance as well as a regular program for development if they are to be useful. Perhaps, this could best be handled by teachers and children in nearby schools.

Although there was a goal of a "land lab" at every school, one wonders if this were realistic or desirable. Perhaps a better approach (hindsight) might have been to have a cooperative arrangement between the schools and the park districts to have suitable units within walking distance of each school as well as the development of resources on each site. A greater effort at cooperation between project personnel, groundsmen, and school administrators may also have resulted in more beautiful and usable school sites than were obtained. In passing, the Evaluator is forced to wonder about the lack of intelligence or aesthetic sense on the part of the individual responsible for the painting of large orange arrows on trees at one of the older land laboratories.

Although the Evaluator had feared that the land labs implied limiting "out of school" activities to these sites, this does not seem to have occurred until after one district imposed busing restrictions. Effort has been made to identify other learning sites and to develop

materials for their use. Interestingly, teachers and principals favor the continued development of their land laboratories.

Developing and maintaining a series of land laboratories, outdoor teaching sites, and a program headquarters, etc.

An excellent inventory of apparatus and equipment was acquired for outdoor-conservation education, and made available to teachers on request. At points in the program, there were complaints about non-delivery, etc., but this seemed to improve during the final year. In addition, more teachers seemed to have become more familiar with what was available and how to obtain it.

There were problems, however. Apparently some of the equipment purchased for the program was unused after three years. Perhaps, as in other Title programs, project personnel got carried away in the selection of materials. There is also a question of accountability and knowing the location of the equipment and apparatus at a given time. The result was that a substantial amount of it may have been lost. Furthermore, there apparently were not enough safeguards in the program guidelines to insure that personal use was not made of equipment and materials.

The maintenance (or lack of it) of some of the large capital items (vehicles, tractor, etc.) also disturbed some administrators. They wondered why some such items appeared to "sit and deteriorate" or were not properly maintained or ready for service the following season. One thought that the equipment might have been better provided for if it had been placed under the care of the regular maintenance staff.

The "mobile laboratory" or van seems to have been a "bust" in this project, as in others. A large expenditure when one considers the uses that were found for it. Despite some difficulties, the gardening program had become a major undertaking and a major focus of interest and concern.

Developing and disseminating teaching materials, resource units, etc. for conservation and outdoor education.

A substantial portion of personnel time the second year was used in the development of teaching materials, resource units and the like. Some of this activity continued the third year, and the Evaluator is of the belief that a quality job was done with these materials--some excellent items were produced.

Although he would question using a large amount of staff time in writing, he does feel that the staff had an important role to perform in collecting and disseminating materials. Emphasis in material development should have been (as it was) on making adaptations for local sites and situations.

The teachers seem to highly regard the materials that were provided and thought that this function to be worthwhile. Criticism about their availability was heard, however. Perhaps, more could have been done by the professional teachers committee to develop and disseminate such materials.

Providing an extensive program of inservice training for teachers in the areas of conservatetion, outdoor, and/or environmental education.

A major project output was the in-service program. It was also seen as one of the most important long lasting outcomes. Although several very good and well received workshops were conducted each year, there are still many teachers unfamiliar with the program and the possibilities of their school sites, the land laboratories, and other resources.

Perhaps the only way a breakthrough can be made to reach all teachers for inservice training of this nature, however, is to have the principals personally assume initiative and responsibility for such training and calling upon the project personnel (who are only in staff positions) for assistance.

In addition to the ongoing workshops, appearances at teacher meetings, individual contracts, etc., arrangements were made in the third year for courses through Ohio State University to be offered at the center. Considering the fact that many teachers consider lack of knowledge to be a deterrant, and the scope of field activities in such courses, they should have been a regularity.

Another effort to provide contact between project staff and teachers was begun the third year by having the outdoor teachers spend several hours each day in a school visiting teachers. This was done during the "slack months," and reactions were mixed. Some of those interviewed thought this a waste of time. Others thought this helpful; but the Evaluator fears that it may have been overdone. Although it is extremely important for such personnel to appear in each school regularly, it may be of doubtful value to station them there for extended periods of time.

Assisting teachers to plan, conduct, and follow-up outdoor experiences.

A primary role of project personnel throughout the life of the project was to assist teachers to plan, conduct, and follow-up field trips. This seems to have been one of the best accepted services provided. Although problems that seemed to exist a year ago in regard to the "availability" of the outdoor teachers seems to have been improved, there were some complaints of tardiness, not being ready, etc.

Perhaps (in theory) it should not be necessary for project personnel to work directly with children. The realities in this project

and in other outdoor education programs are that many teachers want and expect help in working in the field with their pupils. If some children are to have outdoor experiences, the outdoor staff must assume this function from time to time. The staff at Tri-District seems to have met this callenge.

Organizing and administering a program of resident conservation and outdoor education for the 5th and 6th graders in Tri-District schools.

The resident program blossomed in the three years to the point that it seemed that every child would have such experiences. This component seemed to have the solid support of parents, children, and participating teachers. Yet, this area was hit when financial cutbacks were made the third project year. From an educational and a public relations standpoint, the district that found this necessary may have made a serious error, particularly since parents would have been willing to assume most of the cost.

Intra-district and agency cooperation in the development of school and public concern for conservation and environment.

Although the three districts cooperated in this program, the expectation that it would lead to joint operations in other areas did not materialize. Although few serious problems or conflicts arose between the districts in the operation of this project, people never seemed to get over the hurdles that (1) only one district was the local educational educational authority, (2) the headquarters site was on land owned by that district, (3) "they would get title to the remains" should the project be discontinued, and (4) it was never really a part of their school.

This component seemed to be the one aspect of the program that top administrators did not wish to continue--if statements in their phase in reports are an indication. Each appeared to prefer to go on its own.

Other consideration--The product.

Initiators. Even at the cost of the third year most of the initiators who responded approved of the program. Most wanted it continued. Although they picked at weaknesses they generally were supportive and pleased with what had been accomplished.

Although several initiators saw merit in each district going its own way, they felt the program had been successful, that it had some accomplishments, and that they were further along after three years than they could have been without the program.

Assistees. It would have been valuable to have used the teacher and principal opinionnaires at the beginning of the first

project year to note if there really was a change in their use of outdoor experiences, their perception of values, the deterrants, and the program components. The Evaluator suspects there was a significant change.

The "post" data suggests that the program had a substantial amount of support on the part of the Assistees. Getting seventy-five percent or more of the principals to say that a supplementary program should be continued using local funds and in the face of financial problems is a big order at any time. Yet, the principals said the program should continue. Similar support was evident from the elementary teachers (and to a lessor degree the high school teachers).

Recipients. Although the teachers doubted the public support for the program the parent opinionnaires indicated that outdoor activities and the resident program had strong parent support, and parents perceived these programs to be valuable. Replies of children and teachers participating in the program also were supportive.

Further, the test results indicated a slight but significant gain as a result of the resident program and as a result of the short term experiences. Although inconclusive, an indication exists that the program has had an impact in the area of environmental awareness as well as in social relationships.

II CONCLUSIONS

The decision by the three districts to discontinue this project or to go it alone (See Appendix L for PHASE-IN reports) is not pertinent to conclusions about strengths and weaknesses or of successes and failures. Such decisions often are based upon other considerations (in this case financial and, perhaps, personnel conflicts, etc.) rather than on the program's merits or the desire to see it contunue. One cannot discount the tendency, however, for programs believed to be strong by the decision makers to survive all these considerations.

The Evaluator has to conclude that the Tri-District Outdoor-Conservation Education project was a valuable and worthwhile one. Some important services were rendered, some experiences were provided for children, and there should be a carryover into subsequent years through the materials that were developed, the teachers that were trained, and the attitudes that were formed.

What appears to be the commendable aspects of the project at the end of the third year were essentially the same as those at the end of the second year, namely:

a. the cooperative arrangement between three districts. Despite the difficulties and jealousies, the idea makes sense and might have worked here had the right people been involved and had their been complete understanding and communication at all levels. The Title III expectation that one must be the local educational authority and that the others be cooperators probably creates far more difficulty than need be.

b. The positions authorized as a part of the project, and the school district staff associated with it. The persons filling each of these positions were also seen as a strength--although each one had his detracters and each had his supporters. The timing of the change in the Director's position near the middle of the third year was critical and probably influenced decisions about the program's continuation. The interim director seemed to have the necessary interest, enthusiasm, and philosophy, however, he was taking on an extra beyond his regular duties. He could not be available to "put out fires" or to solicit support.

c. The support for the program and the idea of outdoor education voiced by the initiators, teachers, principals, parents, and children.

d. The headquarters, equipment, facilities, apparatus, and instructional materials.

e. The resident program and the enthusiasm of the children, parents and teachers for this program.

f. The inservice program and help provided to teachers--although all were not reached.

g. The newsletter and various other publications--even though there was a dissemination problem.

h. The entire concept of the program.

Less commendable aspects, weaknesses or trouble spots appeared to be:

1. The number of teachers not using the program for various reasons, such as (1) uninformed, (2) insecure when working in new situations, (3) not knowing of the potential of outdoor experiences, (4) antagonisms toward the project or project personnel.

2. The lack of impact or inroads made in the high schools; and becoming known largely as an elementary program. Perhaps this is all that the program should have aspired to being in the first place.

3. The demise of the professional committee about the middle of the third year--and the failure to follow through on some of the projects they had begun.

4. The lack of leadership--especially in the third and critical year. This is not to reflect adversly on the interim director

who was actually seen as a strength in many ways, but at a late date an entirely new situation was created. A supporter of the project with LINE responsibility was brought into the picture on a temporary basis about the time decisions were made about its continuation. It might have been interesting to know what might have happened had the change taken place a year earlier and he had been given time from his regular responsibilities to work in the project.

5. The effect of adverse conditions, situations, or decisions in one district on the entire program.

6. A variety of personality problems throughout the period involving the outdoor teachers, the director, specific school administrators, etc. These detracted from the program far too extensively according to some of those who were interviewed.

7. This was a sideline program--"here we are, how can we help you?"--with project personnel in staff positions. It never had solid enough support in the administrative cabinets (or whatever they are called in these districts) so that they would make it their own program (and call upon project staff for help).

8. That this program--because of the way it was set up--depended too much on personalities and too much on the enthusiasm and drive of its personnel. If these had been ordinary people willing to work in the ordinary way, the program probably would have had a much earlier demise.

III RECOMMENDATIONS

It seems unnecessary at this point to set forth the case for providing children with experiences outside the classroom--experiences in which they learn first hand what is happening in their own communities. But if these are to be provided, and since Tri-District is to no longer function as a cooperative, then each of the districts should:

1. Employ sufficient personnel to assist teachers to provide these experiences. It seems as if a fulltime person would be needed in each of the larger districts, and up to a halftime person in Grandview. In some way or manner, these persons should be placed into the chain of command. Perhaps this could be done in a way similar to that in which a "science consultant" or "reading consultant" is often placed in the chain.

   It is too much to ask these persons to work totally in a staff position--unless they have the whole hearted support

of the administrative staff, and the principals make outdoor and conservation education their own program and call upon these persons to help in its implementation.

2. Although teachers may be aware of some of the services of the program, some may be unaware of its purposes, the basis for its existance, funding, and the attitude of the administration. A statement about these and other aspects of the program should be prepared and distributed to the faculty and the public in each district.

3. In each district, a professional committee should function and assist the outdoor education coordinator. There should be liason between this committee and the administrative cabinet where policy and direction should be set. With the direction for the program coming from these bodies, the outdoor education person would carry out the program. In Tri-District, project personnel apparently set the direction and tried to obtain the cooperation of the administration. Evidently, this was not the way.

4. The success or failure of the program should not depend upon the availability of funds for transportation, to pay teachers to attend institutes, subsidizing the resident program, etc. Although the districts should provide all the help they can, in many districts these costs are paid by the parents of the children, and teachers attend institutes and go to camp with their children--assuming them to be a part of their professional responsibilities --without extra pay.

5. Persons employed as the outdoor education coordinators in these three districts should work together in joint programs. They may share equipment, facilities, and cooperatively sponsor workshops and inservice training programs. They might cooperate in conducting the resident programs. They should meet regularly.

6. The programs underway at this time in the Tri-District project should be continued. Essentially, the services provided in the third year were sound and appropriate.

7. Many of the recommendations made at the close of the second year were not implemented and continue to apply at this time and to the programs in individual districts. Each of these should be reexamined in light of the new situation and of the curricular needs being expressed in the state of Ohio, and nation wide relative to environmental quality. and the failure of many schools to make education relevant to the day-to-day life and needs of its clientele.

IV EPILOGUE

Outdoor and conservation education were not new to schools and teachers in Grandview, Westerville, and Worthington, Ohio in 1968 when Title III funds were made available for the Tri-District project. It was fully expected that children would continue to receive outdoor and field experiences even after Tri-District faded away, or even if none of the three districts continued with a formal program to promote them. Good teachers have provided children with experiences outside the classroom always. Formal programs only assist them to do this, and encourage others to do the same. In some cases, they improve the quality of the experiences.

Tri-District served a useful purpose. Many more teachers will work outdoors with their classes in the future than if it had not existed.

It is unfortunate, perhaps, that circumstances were such that these three school districts could not have continued in their joint endeavor. On the other hand, however, opportunities now exist for them to individually develop their own programs--avoiding the mistakes of the last three years. It is hoped that they do so.

NARRATIVE SECTION

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NARRATIVE SECTION FOR FINAL EVALUATION

HISTORY

During the school year 1966-67 a feasibility study was conducted by the Worthington School District to determine need and readiness for program and facilities for conservation and outdoor education. (This study was funded by an ESEA Title III (P.L. 89-10) grant and six other neighboring school districts cooperated with Worthington.)

As a result of this study and after careful consideration of the need for program and facilities development, three of the above indicated seven school districts selected to jointly support and cooperatively develop a program of conservation and outdoor education in their schools.

In June 1967 an application was submitted by Worthington on behalf of themselves, Westerville and Grandview to the U.S. Office of Education for federal assistance under ESEA Title III to initiate the development of facilities and program for conservation and outdoor education. This application was approved and the Worthington Schools were notified in March 1968. The first budget period for the three year project was negotiated to begin 15 June 1968.

Before Title III.

At the same time the application was submitted to the USOE in June 1967, the three districts (Worthington, Westerville and Grandview) decided to go ahead with some development of program. This was to occur whether or not approval was given to the application for federal assistance. An outdoor education coordinator was hired, and he immediately set about orienting the teachers and administrators to conservation and outdoor education practices and assisting them in identifying the potential of their own school grounds.

Three teacher education workshops were conducted that year with a total of about forty persons attending all together. Extensive planning was done for one school land laboratory and some minor development was done on several other sites in all three school districts.

A regular system of visitation to all schools by the outdoor education coordinator was established, and by the end of the school year, 1967-68, there was some activity in outdoor education being conducted at every elementafy school in the Tri-district area. The secondary schools were also beginning to use the out-of-doors as a teaching resource by the end of that year. In May 1968 a resident outdoor education program was initiated. About 220 fifth and sixth grade students and 40 seventh grade students participated in three day pilot experiences. A program of outdoor activity for a specific grade level was initiated with a winter bird feeding program introduced to kindergarten students. Most other activity that year resulted from teachers voluntarily moving into an outdoor activity with the outdoor education coordinator assisting as a consultant, planner and sometimes outdoor teacher.

UNPREDICTED OUTCOMES

First Project Year Under Title III.

With the beginning of the first budget period, June 1968, and availability of funds for operation, project staff was hired and necessary equipment purchased. Some difficulty was encountered in locating personnel who had formal background in outdoor education coupled with some years of valuable experience. Experience plus the desire to "sell" outdoor education were the criteria used in soliciting staff. One person was hired who had teaching experience in a year-round resident outdoor school plus some experience working with other teachers on behalf of outdoor education. This person was assigned the role as "teacher education specialist." The second professional staff member hired had a horticulture background and had served as director of outdoor education in a nearby school district. This person was assigned as "land laboratory development specialist."

During this first year all programs that had been initiated the previous year were expanded, written materials were prepared to assist the classroom teachers in conducting outdoor activities, and new programs for outdoor study were introduced. Data on all these activities is shown on a project development comparison sheet at the end of this section.

One of the greatest expectations for the first year was the anticipated increase in teacher activity as a consequence of increase in outdoor education staff. This did, in fact, occur; but the increase was not proportionate to the increase in staff personnel. A mobile unit was constructed during the first year. This unit was built around a 12 foot delivery van. Storage areas for specific pieces of equipment were constructed, work areas, water supply and electricity

source were installed. The mobile unit was designed for transporting essential equipment to the outdoor area where a class was to be conducted. There the classroom teacher would have access to equipment and have the students use the equipment and study facility offered by the unit. The outdoor education staff was to employ the unit in teacher education activity and other demonstration purposes.

Second Project Year Under Title III.

At the end of the first project year, it was found that the development of land laboratory facilities and the teacher education program had not increased significantly during the year to warrant having full time staff personnel in those specialized positions. Instead, a very strong need was indicated for a form of teacher education in which an outdoor specialist would work directly with the classroom teacher in the preparation, planning and executing of an outdoor activity. The outdoor specialist would be involved directly in the teaching process and would demonstrate outdoor teaching techniques through direct experience with the students. For this reason the major emphasis of duty assignments for the outdoor education staff personnel was altered slightly to remove the limitations afforded by being assigned a specialty and to give these personnel more latitude in working with the teachers. This would also get students involved as early as possible in an actual outdoor experience, since the activity could be conducted immediately with the outdoor teacher involved.

Land laboratories are still being developed and teacher education is still going on. The restricted functions of the staff have just been removed.

At the beginning of the school year 1969-70, orientation sessions were conducted at all schools in the Tri-district area. At these orientation sessions, the role of the outdoor education staff was presented to the teachers. Specific outdoor and conservation activities were identified. These special outdoor study units had been prepared for administering during the autumn season and gave the classroom teacher a ready-made unit that was relevant to the academic work her students were involved with in the classroom during that season. These units proved very popular with the teachers, and consequently there was quite a demand for planning consultations and other assistance from the outdoor education staff. The manner by which the project objectives were to be met was through the teachers. If the teachers do not understand the need for outdoor education and the means by which it is conducted, then no outdoor study areas would have value at all.

Inservice workshops were conducted again during the second year by the project staff to acquaint teachers with the basic philosophy and techniques of outdoor education and conservation education.

In 1969-70, one two-week workshop was conducted in August, and six three-day workshops were conducted through the school year. The three-day sessions were conducted on a Thursday, Friday and Saturday portion of a week during September, November, January, March, April and May. In addition to the 26 participants in the August workshop, 82* teachers took part in all six of the three-day workshops for a total of 108. During 1969-70, $15 per diem per participant was supplied by Title III funds. This was either paid directly to the teacher or given to the school district to help pay a substitute in order that the participating teacher could be released from class responsibilities to attend the workshop during school days. No teacher was to attend more than one of these seven workshops. The total of 108 participants represents 14.4% of the teaching staff in the three school districts. An increase of 6.2% over the previous year.

The resident outdoor education program had expanded by now to include sessions in the fall as well as those generally conducted in the spring. This has proved very beneficial and rewarding. The social implications involved with a class meeting together on a 24 hour basis in the fall of the year and sharing common experiences serves to bring the class together to work as a cooperating group for the remainder of the school year, plus the fact that the weather is generally more pleasant in the fall helps to promote autumn camping. By no means will all the resident outdoor program be switched to the autumn season, since every season of the year offers some unique experience that would be missed if we limited our time of activity to any one season.

The involvement of high school students as adult group leaders has increased during this current year to the benefit of both the high school students and the elementary students. This has helped to reduce the overall cost of the operation by reducing the number of substitute teachers required to replace classroom teachers pulled out of their classrooms to assist at the camp.

Other activity at the secondary level has increased through the second year of the project. Arrangements are being worked out in the secondary schools for students to have more flexibility in their scheduling to permit a greater opportunity for outdoor oriented classes. The

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* Includes estimate of participants expected for April and May.

secondary teachers are also discovering that a lot can be accomplished during a single period in the outdoors on their own school grounds. By increasing the amount of activity on the school site, one can limit the extended trips that require special attention, special scheduling and special transportation.

Another activity on school site that was introduced during the first year of the project but has expanded greatly the second year, has been the gardening program. This part of the program was designed to involve the students and teachers in working with an outdoor activity right on their school grounds. All the gardens are located on the school sites within easy access by the students working them. Not only does actual gardening activity occur that is normally related to science, but also other activities that involve academic disciplines such as mathematics, language arts, social studies and physical education. This is providing to be a very popular activity and has many implications for future activity on school sites.

An activity which has exceeded our expectations involves work by outdoor study groups at special sites where features exist that are not available on the school sites. Although an effort is being made to use the school grounds on every possible occasion for outdoor study, there still exists the need for an occasional visit to a nearby location that affords a study opportunity that is offered nowhere else. However, a very definite limitation to this type of activity has presented itself in the way of transportation problems. Only two of the three school districts maintain their own bus fleet. Yet even in those two districts there are still no buses available for trips of any significant duration during the school day. The limitations on the availability of bus transportation are based on the schedule on which the buses operate for transporting students between school and home each day. There are no buses available before 9:30 a.m. and all buses must be returned to the bus garage to make ready for the afternoon runs by 2:00 p.m. This represents a maximum of four and one-half hours portal to portal. With an estimated minimum of one hour travel time and one-half hour break for lunch, one is left with only a maximum of three hours for the students to complete the outdoor study activity. When touring a museum, science center or some other area where displays are organized and a learning program is highly structured, it may be possible to complete the objectives for the study trip. However, in the out-of-doors where students are discovering and learning at their own rate, three hours becomes too short. Limitation on distance and quantity of bus trips is also prevalent to the extent that teachers are discouraged from even considering making the initial request for a bus to transport their students. During the first project year, the Title III project was able to acquire special transportation from an outside source, but even that has ceased to be available. The inability to transport students among the school districts to use anothers school land laboratory is threatening the cooperative nature of the entire project.

IMPACT OF TITLE III.

The general impact of the project of the school population as well as the adult population in the community is discussed in the section reflecting the evaluation of the project for the current year. Generally stated from the observations of this writer, the impact on the students and teachers is one of excitement and interest in the use of a teaching--learning resource that has been so sadly neglected. The outdoors is a <u>real</u> place where <u>real</u> things are happening. With few exceptions the whole oopulation of school and community "sees a lot of sense" in outdoor education especially when it is relevant to the complete education of the individual child. through the identification of the child with his environment, man made or natural.

COOPERATIVE EFFORTS

The cooperating agencies in this project are: Westerville, Worthington and Grandview School Districts. There are four main areas in which cooperative efforts have been especially significant. One, the matter of finances. The Worthington Board of Education, as LEA has been the payer of the bills and administrator of the Title III project funds. They also keep the books for that portion of the Title III project that is not paid for by Title III funds, namely the local districts share of the expenses. An arrangement has been set up among the respective Clerks of the Boards of Education of the three school districts whereby the cooperating districts, Westerville and Grandview contribute their fair share of the local district expenses to the Worthington Clerk who then pays all expenses of the project. This fair share is determined each October and is based on the student population of each school district at that time. The share of each district during the second project year (1969-1970) was: Grandview 12 %, Westerville 46 % and Worthington 42 %.

Two. Other school districts and independent agencies outside the project have been very cooperative by permitting the project schools to use facilities that are particularly unique and are not available within the project area. Dublin School District, Boy Scouts of America (Camp Lazarus), Marble Cliff Quarries, Inc., Delaware Claycraft, Columbus Metropolitan Parks, Westerville City Parks, Worthington City Parks, Grandview City Parks, Olen Gravel Quarries, Columbus City Zoo, and several private farmers have been especially cooperative and interested in our project.

Three. The cooperative nature by which the Superintendents of the project schools take part in the activities of the project is noteworthy. In spite of the varying policy standards and procedures that exist among the three school districts, there is an effort on the part of the Superintendents to attempt to standardize certain policies to permit operation across school lines as they exist within the project. Although decisions relating to the operation of the project are primarily the responsibility of Superintendent McCord of Worthington (the LEA), he does consult with the other two superintendents when their districts may be involved. Periodic meetings are conducted at the outddor education office, at which time the superintendents and the project director review project activities and consider implementation of the next series of developments.

Four. A Committee of Teachers for Outdoor Education (CTOE) was organized during the first year of the project. This committee is composed of 26 teachers, one from each of the schools in the Tri-district project. This committee meets once each month to conduct a liason function between the project and the individual schools.

Program materials prepared by the project staff are carried back to the schools by the committee members where the initial implementation is made by the CTOE member. Problem areas in specific schools are identified very quickly by the committee member so the project staff has an opportunity to offer service where it is in greatest need. One of the most significant functions of the CTOE during the second project year was the formation of special task forces within the whole committee. These task forces work on specific areas of the project where assistance is needed. Not only are they serving to assist an undermanned outdoor education staff, but they are also better able to identify the real needs of the teachers in the project since, after all, they are the teachers. These task forces are identified with the following tasks:

1. Writing and publishing a policies and procedures manual for the resident outdoor education program.

2. Implementing outdoor education in the secondary schools.

3. Development of a curriculum guide for outdoor education.

4. Consideration of future development activities for the project.

The results of such a committee working together is evident in the cooperative attitude that prevails and the greater understandings that have developed among teachers from different districts and especially among teachers from one school district, but representing different grade levels. Ideas for outdoor activities are shared across school district lines and students in all three districts benefit.

DISSEMINATION

The work of dissemination occurs primarily within the project area. Special requests for information about the project from outside the project area are responded to, of course, but the efforts of dissemination by the project staff are directed at our own project area students, teachers, parents and community. This dissemination occurs in several ways. First is the direct personal contact by the project staff and the CTOE members. Second, a newsletter is published periodically throughout the year informing the reader of past, present and future activities of the project. Incidentally, preparation of this newsletter is another function of the CTOE. Third, there were several occasions when the local newspapers printed stories and/or news items about the project. There was one major TV station in Columbus that covered a group of our students as they were leaving for their week of resident outdoor school. This coverage was presented on the evening news during prime time. Fourth, visitation by outsiders to the project and visits by project staff to other areas comprises the bulk of the dissemination activities.

PROJECT FUNDING PROCEDURES

The technique employed for sharing of expenses was described earlier in this section under "Cooperative Efforts." There is no significant change in the plan for phasing out of Title III funds from the manner in which it was described in previous applications. Basically, the plan for the third year called for the local school districts to pay approximately two-thirds of the expenses of the project that are continuous expenses. That is to say those expenses such as salaries, maintenance, etc., that are essential just to keep the project operating. Title III is to pay one-third of these expenses- this during the year 1970-71, the third project year. Most other expenses that are one time expenditures are paid for by Title III funds. It is generally these materials that make the development of the innovative features of the project possible, but are so difficult to acquire with local funds.

COSTS

The estimated costs listed here are for the budget period 10 August 1970 through 14 June 1971.

TOTAL COSTS	$ 77,968
TOTAL NON-FEDERAL SUPPORT	44,136
TOTAL SUPPORT UNDER TITLE III (P.L. 90-247)	33,832
TOTAL FEDERAL SUPPORT OTHER THAN TITLE III	None

THIRD PROJECT YEAR UNDER TITLE III

During the third year the initial goals and objectives of the project were continued. Material development was continued as well as the resident outdoor education program. Teacher education workshops were held in the fall and spring.

Mid-year, January, the Director of the project left for another position, and an interim director was appointed. Tax levy defeat in the Westerville Schools caused them to withdraw from the project at the close of schools in June, 1971. Grandview also withdrew their support of the project shortly thereafter.

All three districts, Worthington, Westerville and Grandview wrote individual phase-in reports. See Appendix L..

UTILIZATION OF EQUIPMENT AND MATERIAL

See *Proposal for Utilization of Equipment and Material from Tri-District Outdoor Education Project*, Appendix L.

APPENDICES

A

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APPENDIX A

PERCENTAGE TABULATION OF REPLIES: PRINCIPAL'S EVALUATION OPINIONNAIRE
TRI-DISTRICT OUTDOOR EDUCATION PROJECT, 1970 and 1971
(K through 6th Grades)

I. OUTDOOR EDUCATION IN GENERAL

A. Please indicate by placing an "X" in the appropriate space to indicate what you believe to be the importance (or potential importance) of outdoor education or outdoor experiences in regard to each of the following:

(Note: 1970 - N = 16; 1971 - N = 18)

	Percentages:					
	Low				High	
1971	11	6	33	28	22	1. Concept formation
1970	0	6	31	13	50	
1971	6	0	6	39	50	2. To develop concerns about environment
1970	0	6	6	13	75	
1971	6	11	33	11	39	3. To clarify understandings
1970	0	0	19	56	25	
1971	6	22	28	17	28	4. To improve social relationships
1970	6	31	13	25	19	
1971	6	33	6	28	28	5. As a change of pace
1970	0	31	13	19	25	
1971	0	6	22	22	50	6. As a motivating experience
1970	6	13	19	19	44	

B. Of what importance is each of the factors listed below as a deterrent to your use of the out-of-doors in your teaching?

1971	22	6	22	28	22	1. Lack of understanding or knowledge about the out-of-doors by teachers
1970	6	25	13	25	31	
1971	0	11	44	39	6	2. Lack of time - too much to cover
1970	0	13	25	38	25	
1971	39	22	17	11	6	3. Restrictive school policies - too much "bother" for what is gained
1970	44	31	0	6	19	
1971	28	17	44	11	0	4. Negative attitudes by peers
1970	19	31	38	13	0	

1971	33	17	33	11	6	
1970	31	38	13	13	6	5. Liability concerns
	Low				High	
1971	44	22	17	11	6	
1970	31	25	25	19	0	6. Lack of suitable sites or apparatus
	Low				High	
1971	33	22	28	11	6	
1970	19	44	6	13	19	7. Teachers' lack of ability to handle a large group of children outdoors
	Low				High	
1971	44	28	22	17	11	
1970	19	50	6	0	0	8. Scheduling difficulty
	Low				High	

II. OUR TRI-DISTRICT OUTDOOR EDUCATION PROGRAM

A. Indicate the extent to which you AGREE or DISAGREE with each of the following statements about aspects of the Tri-District Program (SA - strongly agree; A - agree; N - no opinion; D - disagree; SD - strongly disagree):

1. The institutes, workshops, and other efforts of the outdoor education staff to familiarize teachers with the out-of-doors and outdoor teaching approaches appears to be an important step in the right direction.

1971	61	33	6	0	0
1970	38	50	0	13	0
	SA	A	N	D	SD

2. The publications (curriculum and resource guides, newsletter, worksheets etc.) of the type being produced by program personnel are useful and needed.

1971	17	50	22	11	0
1970	25	50	0	25	0
	SA	A	N	D	SD

3. The facility now housing the outdoor education program appears adequate and likely to increase the program's impact.

1971	28	33	17	11	6
1970	25	38	25	13	0
	SA	A	N	D	SD

4. We should continue to develop our land laboratories, making them more available and useful to teachers and children.

1971	55	33	0	11	0
1970	63	25	0	6	6
	SA	A	N	D	SD

5. Efforts to inform teachers of the services available to them through the program have been adequate.

1971	22	50	0	22	6
1970	31	19	0	31	13
	SA	A	N	D	SD

6. This program seems to be gaining the acceptance of the teachers, generally.

1971	22	44	0	22	0
1970	0	69	0	19	13
	SA	A	N	D	SD

7. Generally, the public is aware of the program and supportive.

1971	11	50	11	17	0
1970	6	38	25	31	0
	SA	A	N	D	SD

8. In my opinion, this is a worthwhile program that should be continued after federal funding is discontinued.

1971	39	28	6	6	6
1970	44	38	0	6	13
	SA	A	N	D	SD

APPENDIX B

PERCENTAGE TABULATION OF REPLIES: TEACHER'S EVALUATION OPINIONNAIRE
TRI-DISTRICT OUTDOOR EDUCATION PROJECT, 1970 and 1971
(Teachers in Grades 7 through 12)

I. OUTDOOR EDUCATION IN GENERAL

A. Please indicate by placing an "X" in the appropriate space to indicate what you believe to be the importance (or potential importance) of outdoor education or outdoor experiences in regard to each of the following:

(Note: 1970 - N = 48; 1971 - N = 33)

	Percentages:					
	Low				High	
1971	3	3	24	27	39	1. Concept formation
1970	19	2	27	23	25	
1971	0	6	3	3	89	2. To develop concerns about environment
1970	0	0	8	15	68	
1971	0	6	30	27	35	3. To clarify understandings
1970	4	2	19	29	29	
1971	15	21	27	3	32	4. To improve social relationships
1970	10	15	25	19	21	
1971	3	9	18	30	39	5. As a change of pace
1970	6	8	10	8	56	
1971	3	6	32	15	39	6. As a motivating experience
1970	0	10	15	27	40	

B. Of what importance is each of the factors listed below as a deterrent to your use of the out-of-doors in your teaching?

	Low				High	
1971	33	33	27	0	3	1. My own lack of understanding about the out-of-doors
1970	33	6	26	13	10	
1971	12	15	27	21	21	2. Lack of time - too much to cover
1970	23	4	15	15	32	
1971	39	12	12	6	27	3. Restrictive school policies - too much "bother" for what is gained
1970	35	19	10	10	17	

1971	52	9	27	6	3	
1970	54	21	13	2	0	4. Negative attitudes of supervisors and/or peers
	Low				High	
1971	39	30	21	0	6	
1970	46	19	17	2	6	5. Liability concerns
	Low				High	
1971	36	18	18	9	15	
1970	33	10	19	10	13	6. Lack of suitable sites or apparatus
	Low				High	
1971	57	15	24	0	0	
1970	60	13	8	4	2	7. My own inability to handle a large group of children outdoors
	Low				High	
1971	21	9	9	15	42	
1970	27	8	19	13	33	8. Scheduling difficulty
	Low				High	

II. OUR TRI-DISTRICT OUTDOOR EDUCATION PROGRAM

A. Indicate the extent to which you AGREE or DISAGREE with each of the following statements about aspects of the Tri-District Program (SA - strongly agree; A - agree; N - no opinion; D - disagree; SD - strongly disagree):

1. The institutes, workshops, and other efforts of the outdoor education staff to familiarize teachers with the out-of-doors and outdoor teaching approaches appears to be an important step in the right direction.

1971	45	48	6	0	0
1970	27	43	15	4	0
	SA	A	N	D	SD

2. The publications (curriculum and resource guides, newsletters, worksheets, etc.) of the type being produced by program personnel are useful and needed.

1971	18	45	27	9	0
1970	13	47	17	13	2
	SA	A	N	D	SD

3. The facility now housing the outdoor education program appears adequate and likely to increase the program's impact.

1971	21	21	51	6	0
1970	4	23	58	10	2
	SA	A	N	D	SD

4. We should continue to develop our land laboratories, making them more available and useful to teachers and children.

1971	54	39	6	0	0
1970	40	46	8	0	0
	SA	A	N	D	SD

5. Efforts to inform teachers of the services available to them through the program have been adequate.

1971	9	54	12	21	3
1970	8	13	19	25	8
	SA	A	N	D	SD

6. This program seems to be gaining the acceptance of the teachers, generally.

1971	3	48	45	3	0
1970	4	19	50	17	2
	SA	A	N	D	SD

7. Generally, the public is aware of the program and supportive.

1971	0	21	51	18	3
1970	0	10	52	23	6
	SA	A	N	D	SD

8. In my opinion, this is a worthwhile program that should be continued after federal funding is discontinued.

1971	45	63	9	0	6
1970	23	42	17	8	4
	SA	A	N	D	SD

APPENDIX C

PERCENTAGE TABULATION OF REPLIES: TEACHER'S EVALUATION OPINIONNAIRE
TRI-DISTRICT OUTDOOR EDUCATION PROJECT, 1970 and 1971
(Teachers in Grades K through 6)

I. OUTDOOR EDUCATION IN GENERAL

A. Please indicate by placing an "X" in the appropriate space to indicate what you believe to be the importance (or potential importance) of outdoor education or outdoor experiences in regard to each of the following:

(Note: 1970 - N = 62; 1971 - N = 67)

	Low				High	
1971	0	3	27	28	42	1. Concept formation
1970	0	3	29	32	27	
1971	0	0	7	12	81	2. To develop concerns about environment
1970	0	0	5	15	79	
1971	3	1	13	30	49	3. To clarify understandings
1970	0	6	26	31	32	
1971	0	12	16	24	28	4. To improve social relationships
1970	3	16	32	34	11	
1971	3	4	13	33	46	5. As a change of pace
1970	0	3	21	24	47	
1971	0	0	9	24	67	6. As a motivating experience
1970	3	2	8	22	63	

B. Of what importance is each of the factors listed below as a deterrent to your use of the out-of-doors in your teaching?

	Low				High	
1971	22	18	40	7	10	1. My own lack of understanding about the out-of-doors
1970	3	5	35	34	22	
1971	21	10	15	25	28	2. Lack of time - too much to cover
1970	0	0	19	18	61	
1971	40	16	33	6	4	3. Restrictive school policies - too much "bother" for what is gained
1970	40	16	16	18	8	

1971	69	15	10	4	1	
1970	50	10	18	6	10	4. Negative attitudes of supervisors and/or peers
	Low				High	
1971	36	28	16	15	4	
1970	53	18	16	10	2	5. Liability concerns
	Low				High	
1971	37	25	27	6	4	
1970	38	23	19	5	6	6. Lack of suitable sites or apparatus
	Low				High	
1971	49	30	15	4	0	
1970	40	19	19	11	5	7. My own inability to handle a large group of children outdoors
	Low				High	
1971	22	19	27	12	19	
1970	27	23	21	11	15	8. Scheduling difficulty
	Low				High	

II. OUR TRI-DISTRICT OUTDOOR EDUCATION PROGRAM

A. Indicate the extent to which you AGREE or DISAGREE with each of the following statements about aspects of the Tri-District Program (SA - strongly agree; A - agree; N - no opinion; D - disagree; SD - strongly disagree):

1. The institutes, workshops, and other efforts of the outdoor education staff to familiarize teachers with the out-of-doors and outdoor teaching approaches appears to be an important step in the right direction.

1971	63	30	6	0	1
1970	35	40	6	1	0
	SA	A	N	D	SD

2. The publications (curriculum and resource guides, newsletter, worksheets, etc.) of the type being produced by program personnel are useful and needed.

1971	28	58	7	6	0
1970	29	58	7	3	0
	SA	A	N	D	SD

3. The facility now housing the outdoor education program appears adequate and likely to increase the program's impact.

1971	16	49	24	7	0
1970	7	40	40	6	0
	SA	A	N	D	SD

4. We should continue to develop our land laboratories, making them more available and useful to teachers and children.

1971	66	27	4	1	0
1970	56	27	11	1	0
	SA	A	N	D	SD

5. Efforts to inform teachers of the services available to them through the program have been adequate.

1971	13	46	15	21	3
1970	16	55	10	18	0
	SA	A	N	D	SD

6. This program seems to be gaining the acceptance of the teachers, generally.

1971	18	49	24	9	0
1970	16	48	21	11	0
	SA	A	N	D	SD

7. Generally, the public is aware of the program and supportive.

1971	0	30	30	33	4
1970	3	24	47	24	2
	SA	A	N	D	SD

8. In my opinion, this is a worthwhile program that should be continued after federal funding is discontinued.

1971	55	28	6	10	0
1970	43	39	11	3	2
	SA	A	N	D	SD

APPENDIX D

THE OUTDOOR EDUCATION TEACHERS' VIEW
(Percentage Tabulation of Responses)
1970 - 1971

1970 - N = 17; 1971 - N = 50

Item:	% Yes	% No	
1. Outdoor Education is better as a reinforcement to learning than as a basic teaching technique.	35	65	1970
	42	58	1971
2. Although outdoor education has some value, it disrupts the classroom routine too much.	0	82	1970
	6	94	1971
3. My principal encourages teachers to participate in the outdoor education program.	47	29	1970
	76	24	1971
4. It takes too much extra preparation to conduct an outdoor education activity.	6	94	1970
	8	92	1971
5. I don't feel I can identify enough things outdoors to make an outdoor activity worthwhile.	18	82	1970
	22	78	1971
6. I would like to do more things in the outdoors but student transportation arrangements restrict me.	41	53	1970
	54	46	1971
7. Although outdoor education is fun, I doubt if the students learn as much in the same length of time as they do indoors.	6	94	1970
	8	90	1971
8. I see outdoor education as an equalizer for educational opportunity whereby the slower learner has a relatively better chance to learn than the rapid learner.	35	35	1970
	62	36	1971
9. Class control is a greater problem outdoors than indoors.	53	41	1970
	32	66	1971
10. The development of an outdoor education program could be better accomplished through an inservice teacher education program than by a special outdoor education staff.	12	82	1970
	28	70	1971

APPENDIX E_1

PERCENTAGE TABULATION OF REPLIES
SUMMER WORKSHOP OPINIONNAIRE - 1970

N = 33

Item:	Percentage Replying* SD	D	N	A	SA
1. The Tri-District summer workshop met my specific needs.	9	15	6	42	27
2. The workshop content correlated with the pre-registration material I received.	6	3	12	55	24
3. I learned to use equipment with which I had no previous experience.	6	6	6	42	39
4. The workshop introduced me to outdoor study units which I have used with my class.	15	15	12	42	15
5. As a result of the workshop I have more confidence in conducting outdoor activities.	3	3	15	48	30
6. Because of the workshop I have contacted the Tri-District Outdoor Education office for assistance.	12	18	3	55	12
7. The equipment and teaching materials were adequately demonstrated.	9	6	12	48	24
8. The workshop schedule was well conceived and executed.	6	9	12	39	33
9. The daily schedule was closely followed.	9	9	3	58	21
10. Outdoor education is a teaching technique for science.	18	12	3	39	27
11. There was sufficient opportunity for individual participation in outdoor activities.	3	12	12	39	33
12. Workshops like this should be available to others in the future.	3	0	3	39	55

*SD - Strongly Disagree; D - Disagree; N - Undecided or No Opinion; A - Agree; SA - Strongly Agree.

APPENDIX E_2

EVALUATION OPINIONNAIRE

OUTDOOR EDUCATION TEACHER WORKSHOPS (1970 - 1971)
PARTICIPANT REPLIES N = 70

Some time ago you participated in a workshop sponsored by the Outdoor Education Project. Perhaps you were told at that time that you would receive an evaluative questionnaire and be asked to give your reactions to various facets of the workshop and to set forth what you believe to be its values.

Your responses can help us to decide if we should continue with these workshops and (if they are to be continued) to discover ways to improve them. Obviously, we cannot know how this program is being received or how to proceed in the future unless every person replies and provides his candid reactions. Hence, our request that you respond to the following items and return this questionnaire in the enclosed envelope. Respond by checking the appropriate point on the five point scale line.

1.	The amount of work I did for this workshop was:	very great	4	23	35	4	4	quite small
2.	The quality of my work in this workshop was:	excellent	3	33	34	___	___	poor
3.	I learned from this workshop:	very much	35	22	11	___	2	very little
4.	The subject matter, methods, or skills learned will be:	very useful	30	26	7	7	___	useless
5.	The instructor(s) expressed ideas clearly.	always	20	36	11	3	___	never
6.	The instructor(s) knowledge of the subject appeared to be:	excellent	44	23	2	1	___	poor
7.	The instructor(s) appeared to be well prepared:	always	38	25	5	2	___	never
8.	The lectures were:	informative	29	30	10	1	___	wasteful
9.	The discussions were a waste of time:	always	2	8	12	23	24	never
10.	The indoor work was a waste of time:	always	___	6	10	30	24	never

Appendix E_2 (continued)

11.	The texts and other reading material in respect to workshop objectives were:	relevant	35	20	11	2	1	irrelevant
12.	The subject matter was intellectually stimulating:	always	16	29	18	5	___	never
13.	The subject matter was:	up-to-date	52	16	2	___	___	outdated
14.	The workshop should be given to teachers who are:	more advanced	2	2	47	8	6	less advanced
15.	For elementary teachers this workshop should be:	required	27	19	20	2	___	dropped
16.	For secondary teachers this workshop should be:	required	12	17	26	7	___	dropped
17.	I would like to take another workshop in this area:	definitely	35	18	12	3	1	definitely not
18.	I learned from the field trip part of the workshop:	very much	40	18	3	3	4	very little
19.	The subject matter, methods or skills learned from the field trips have been:	very useful	32	22	7	6	___	useless
20.	The subject matter, methods or skills learned from the field trip will be:	very useful	27	23	12	4	2	useless
21.	The workshop should be:	shorter	4	4	43	6	7	longer
22.	My competence in the use of equipment available through Tri-District was:	greatly improved	27	27	15	___	___	unchanged
23.	Confidence in my ability to use outdoor education techniques was:	greatly increased	30	25	11	1	2	unchanged
24.	My ability to relate O.E. activities to curriculum needs at my school site was:	greatly increased	23	25	15	4	2	unchanged
25.	My attitude toward the esthetic value and educational value of O.E. was:	greatly changed	20	19	18	3	10	unchanged

Appendix E_2 (continued)

PART II - Randomly selected replies:

Question 1. What phases of the workshop were most beneficial to you?

Replies: The method used in setting up the geological field trip.

The mini-units, equipment instruction.

Use of equipment and library materials.

The equipment and becoming familiar with it.

Experimenting with equipment.

Sharing ideas of outdoor activities.

Planning a curriculum as far as how I could use O.E. this year.

Trees, soil, water, use of equipment.

Using the equipment and writing units of study.

Field trip to museum and lectures on early Ohio civilizations--techniques used to identify civilizations, locations, artifacts with relation to environment.

Actual participation - games - uses of equipment.

All the "doing" areas, especially maple syrup area.

Field trip--creativity oriented activities.

Question 2. What phases were least valuable?

Replies: Map Drawing

Saturday a.m. - four hours wasted on writing a lesson plan.

A few of the demonstrations.

Lunch preparation.

Surveying - mapping our school sites.

I found it all valuable, but not all pertinent at primary level.

Demonstration of equipment. I was thoroughly familiar with it. However, several other teachers were not familiar with the same equipment.

Appendix E_2 (continued)

The time spent indoors.

Surveying and measuring land and timber, although this was interesting for I had never used these instruments before.

(Note: Many of the participants left this item blank.)

Question 3. In what general areas could you use an "in-depth" workshop?

Replies: All areas of science.

Outdoors and Creativity.

Ecology and Pollution.

Nature as it affects interaction of humanity on social and dense level.

Early to mid 1800 daily life.

Air pollution - urban development.

Mathematics.

Life science.

Geology of the area - Advanced OE for Biology.

Signs of animals who live in our area. More ideas for primary grades.

Perhaps a good in depth workshop might dwell solely in a curricular area. Such as teaching math in the outdoors or teaching Language Arts in the outdoors. This type of in-depth workshop, I feel, would be most beneficial.

Secondary science - methods - resources for activities at this level.

Preparation, development of guide trails and land lab.

Surveying and Map drawing. Choosing and identifying such things as wild food, wild flowers, trees and other natural phenomena.

Appendix E_2 (continued)

Question 4. Provide any comments or suggestions that you can to help improve the outdoor education teacher workshops or program that have not been covered in the preceeding questions.

Replies:

Have more actual units that people could actually participate in such as pioneers, using natural materials as boiling sugar maple, building wigwam. As in prehistoric, actually go look for artifacts. Also provide ideas in other subject matter and allow participation.

Publicize them more so more teachers are aware of them. Many teachers feel they are only for elementary and/or science teachers.

More equipment. There are not enough leaf keys for example, thus making it somewhat difficult to obtain enough for a class at a time that they are needed.

All should be required to take workshops. Units should be developed, bound and placed in each school building for teacher use.

The workshop was a great experience and taught me a great deal about the outdoors. It got me thinking about outdoor activities that never would have occured to me.

Segregate according to age level taught.

Certain parts of the program such as the "hands-on" portion were not given enough time, while other parts of the program seemed to drag.

The workshop I was in was geared too much toward the elementary instructor. I feel it would be much more effective if workshops were structured for either elementary or secondary rather than for a mixture.

EVALUATION APPENDIX F

INVENTORY OF ATTITUDES, INTERESTS, AND APPRECIATIONS

DIRECTIONS: We need to know what boys and girls have done, what they like to do, and what they think about science and nature. If we know this, we can improve our schools and make learning more interesting and less difficult. Please help by being honest and telling us just what you think about these things. You will not be graded by these papers.

Read each statement carefully. If you AGREE with it and think it is true, fill in the "A" space on your answer sheet. If you DISAGREE or think the answer to be false, fill in the space under the "B" on the answer sheet. In a few cases you may not have an opinion or be unable to give either answer. Then fill in a "B" or "C" space.

1. When a bad man gets sick or ill, he is getting just what he deserves.
2. Most of the important things that scientists discover are more the result of lucky accidents than hard work.
3. I think that frequent washing and bathing can do more harm than good.
4. I think it is very interesting to study live animals and specimens.
5. We can't predict anything about nature from the results we get when we do an experiment.
6. Once I have decided that an answer is right, I will stick with it, even if the evidence indicates that I am wrong.
7. I like to read about the way scientists think the earth and planets were formed.
8. I like to study about the weather and try to predict when it will rain or snow.
9. I don't see much sense in doing extra work when the teacher doesn't give me extra credit for it.
10. I like to spend some of my spare time working on science collections and things like that.
11. It is silly to think that a man could spend many years studying about one kind of insect.
12. By the time a person has graduated from college, he has learned almost everything worth knowing.
13. The world will be a much nicer place in which to live when man learns to control all natural events.
14. I don't think it is fair that my parents should make me do homework when TV programs that I like are on.
15. Scientists have discovered and named all the plants and animals.
16. Scientists should be free to do whatever they wish, even though a few people may be harmed, because their discoveries will help all of us.
17. I like to build things out of wood, metal, and other materials.
18. I like to study rocks and learn how they are formed.
19. I like to read magazine articles that tell me how to make and build things.
20. We have to travel a long distance to find beautiful things to look at that interest me.
21. I often forget to take my books home, or else forget my homework assignment.

22. I admire a person who will take another's side in an argument if he knows he is in the wrong.
23. I like to experiment with baking soda, vinegar, salt, and other kitchen chemicals to find out what happens when they are mixed.
24. I like to think about problems concerning how the earth and stars came about and how they were formed.
25. Science is a way of thinking and of doing to learn about things.
26. When we think about how large the universe is, I feel real small.
27. I just hate mice, bugs, and other small crawling things.
28. I think that thunderstorms are horrible and they frighten me.
29. We have few problems that scientists cannot solve.
30. We can depend on what our textbooks say, for anything that is printed has to be true.
31. I step on bugs whenever I can.
32. I like to study books and magazines to find out how motors and things work.
33. It is very difficult for scientists to find new problems to work on.
34. It is probably a waste of time for a good scientist to write out and explain the problems he is working on.
35. I like to read science newspaper and magazine articles.
36. You can usually tell if a person is mean or can't be trusted by looking at him.
37. I like to experiment with plants to find out if light or soil or other things make a difference in how fast they grow.
38. Science has done much good for man, but this is probably outweighed by the harm it has caused.
39. The Communists are probably the cause of most of the airplane crashes.
40. If we have a lot more of something than we can use, there is nothing wrong in wasting some of it.
41. People with red hair usually have bad tempers.
42. I usually get a lower grade than I deserve.
43. I like to make repairs on things around home just for the fun of it.
44. Students should receive pay for the work they do in their studies.
45. When doing a very short experiment, it isn't necessary to take notes because one can remember until he is finished to write down what happened.
46. It is not good for a scientist to marry and have children because he does not have time to be with them.
47. I would like to place several eggs in an incubator and open one every day to see how a chick develops.
48. Since many people think of "13" as an unlucky number, it is not a good idea to have a birthday party at which this number of people are present.
49. I would rather go to town and look at cars and buildings than to roam about the forest.
50. My parents are often unfair and blame me unjustly for things I didn't do.

51. I am ashamed and feel bad when I see paper and trash scattered along our roads and river banks.

52. I really don't believe anything until I see it for myself.

53. I don't think this country is as nice a place in which to live as it was when the colonists lived here.

54. Camping out and living like the Indians used to do is something I would like to do for several weeks.

55. I find that feeling and looking at things about which we read and study makes learning easier and more interesting.

56. I like to look for things and learn what I can about them outside when there is lots of snow on the ground.

57. Since trees take a long time to grow, we should leave them along and not destroy them for any reason.

58. I would rather watch TV than play outside.

59. Boys usually know more about animals, trees, rocks, and weather, but girls usually know more about things in books.

60. We take field trips mostly to get away from school, and we really don't learn much when on them.

61. Things like birds, insects, and wild flowers are real important to me.

62. I would rather write a story or draw a picture of something outside in nature than a building or something that men have constructed.

63. I would like to catch and hold a frog, a squirrel or other wild animal in my hands.

PART II

DIRECTIONS: If you <u>have done</u> an item listed below, place a mark in the space below "A" on your answer sheet. Make <u>no mark</u> for the items you have not done. Include those done in school, at home, or anywhere. <u>Do not</u> mark any that you just plan to do or those you have seen someone else do. (Notice that you begin with Answer No. 64.)

64. Heated a glass tube so that it could be bent or molded.

65. Grown mold on a piece of moist bread or similar material.

66. Recorded the out-of-doors temperature at several intervals during the day.

67. Watched protozoa or other one-celled animals through a microscope.

68. Made an electrical circuit to cause a lamp to light.

69. Dissected an animal specimen to study its internal parts.

70. Examined the underside of a leaf under a microscope to find the stoma.

71. Taken a flash-light or dry-cell battery apart to see how it was made.

72. Observed the spectrum made by a prism.

73. Examined some soil with a magnifying glass for small animals.

74. Examined the cross-section of a bone.

75. Made a tin-can telephone.

76. Used a Centigrade Scale thermometer to measure temperature.

77. Tested the hardness of several rocks to see which was hardest.
78. Observed the spores of a puffball.
79. Observed the root hairs of a plant through a microscope.
80. Observed the disintegration of atoms in a cloud chamber.
81. Looked at the eye of an insect through a magnifying lens.
82. Looked at blood cells through a microscope.
83. Measured the speed that light travels.
84. Examined the legbones of a chicken or other small animal to see how they are held together.
85. Found a fossil for myself.
86. Seen a bird and later found its name.
87. Examined a tree and learned its name.
88. Predicted what the weather would be like the next day and been right.
89. Helped to cook a meal over an open fire outdoors.
90. Slept in a tent or in the open.
91. Located the Big Dipper or North Star or any other constellation.

PART III INTEREST INVENTORY

DIRECTIONS: Some activities that boys and girls like to do are listed below. Please show on your answer sheet how MUCH INTEREST you have for each activity. If you have:

NO INTEREST . . . Fill in "A"
LITTLE INTEREST . Fill in "B"
SOME INTEREST . . Fill in "C"
MUCH INTEREST . Fill in "D"
GREAT INTEREST . Fill in "E"

Notice: You begin with Answer No. 92.

92. Going Swimming
93. Listening to the radio
94. Going to a movie
95. Riding in a boat
96. Going fishing
97. Playing softball
98. Going on a hike
99. Dancing to records
100. Reading maps
101. Playing card games
102. Learning about nature (birds, trees, animals, flowers)
103. Reading books
104. Looking at stars
105. Listening to stories
106. Playing football
107. Singing songs
108. Camping skills (such as knot tieing fire building, and knife and axe)
109. Reading comic books
110. Collecting rocks
111. Watching television
112. Shooting arrows with a bow
113. Riding a bicycle
114. Cooking in the outdoors
115. Playing basketball
116. Collecting such things as stamps, coins, baseball cards, etc.
117. Looking at live animals and specimens
118. Making predictions about the weather
119. Collecting such things as rocks, plants, and insects
120. Making repairs and fixing things

APPENDIX G

PERCEPTION OF VALUES OF RESIDENT OUTDOOR EDUCATION, STUDENT OPINIONNAIRE

(Percentage Tabulation of Responses)

1969 upper row N = 191
1970 lower row N = 248

Statement	Percent Yes	Percent* No
1. I offered to do more than my share in group activities.	58 58	43 41
2. My groups benefited because of my participation.	53 68	45 31
3. I followed camp rules and leaders directions.	86 92	9 8
4. I learned something about my classmates that helped me to know them better.	88 84	12 15
5. I know my teacher better this year than I have known my other teachers in years past.	70 75	30 25
6. I was treated fairly at camp.	90 92	10 8
7. I feel "at home" in my class.	73 71	27 29
8. I made new friends while at camp.	92 67	8 33
9. I learned some new manners while at camp.	68 45	31 54
10. We should preserve the outdoors in the future.	96 97	4 3
11. I learned something about my teacher that helped me know him better.	72 68	28 32
12. This was my first time away from home.	15 9	86 91

*Not all students responded to all items.

Appendix G (continued)

13.	This was my first time camping.	23 20	77 80
14.	Did you purchase any clothing or equipment especially for camp?	68 43	32 57
15.	I got enough sleep while at camp.	77 73	23 27
16.	I know more about taking care of myself now than before I went to camp.	52 54	48 46
17.	I have had fewer problems with my teacher this year than I have had with my other teachers in years past.	56 62	44 38
18.	I earned all or part of the money needed to go to camp.	37 43	63 57
19.	The discipline at camp was reasonable.	88 85	11 15
20.	I liked my teacher more after we went to Camp Ohio.	66 72	33 27
21.	I had enough equipment to do the assignments required at camp.	97 91	2 8
22.	I liked the college or high school students that helped at camp.	95 94	4 6
23.	I was confused when I left for camp.	20 19	80 79
24.	If I had any, my confusion and anxiety went away once I got to camp.	78 76	21 24
25.	We have studied some things in our classroom that relate to what we did at camp.	85 89	15 11

26. Liking or disliking the following*

	Percent Like		Percent Dislike		Percent Didn't Do It	
	1969	1970	1969	1970	1969	1970
1. Food	93	90	7	10		
2. Cook out	93	94	7	6		

*Note: This year (1970) a large number of pupils reported they had not participated in the Night Hike or Astronomy. Hence, no tabulation was made of the responses to these items. Items 13 through 15 were not included on the 1970 opinionnaire.

Appendix G (continued)

	Percent Like		Percent Dislike		Percent Didn't Do It	
	1969	1970	1969	1970	1969	1970
3. Discovery Groups	80	86	19	14	1	
4. Cabin Groups	82	85	15	15	1	
5. Eating Groups	83	85	14	16		
6. Stream and Pond Study	85	87	14	13		
7. Study of Soil	73	79	22	21	5	
8. Storytelling and Skits	85	88	11	12	5	
9. Creative Arts	83	81	15	19	1	
10. Abandoned Farm	87		2		9	
11. Night Hike	75		9		16	
12. Astronomy	76		16		8	
13. Mr. Colville's Farm	88		4		8	
14. Sleeping Quarters	79		21			
15. Restroom facilities	62		38			

APPENDIX H

COMPARISON OF REPLIES OF CHILDREN WHO HAVE HAD CLASSES IN THE OUTDOORS WITH THOSE NOT HAVING SUCH EXPERIENCES (True-False items) 1970 and 1971.

Outdoor group 1970 N = 134	Non-outdoor group 1970 N = 71	Outdoor group 1971 N = 119

	1970 With Outdoor Experiences Percent		1970 Without Outdoor Experiences Percent		1971 With Outdoor Experiences Percent	
	True	False	True	False	True	False
1. Bats are more closely related to mice than to birds.	56	44	50	50	50	50
2. There are more different kinds of birds here in the winter than in the spring.	7	93	6	94	8	92
3. Not all insects like the same area; some like a meadow while others prefer a woods.	94	6	100	6	96	4
4. "Jack Frost" causes the leaves of trees to change color in the fall.	20	80	38	42	18	82
5. We should clean up our own litter but not anyone elses.	14	86	17	83	18	82
6. Wild flowers belong to everyone so we can pick them if we want to.	16	84	22	78	26	74
7. It is O.K. to shout and make all the noise we want to when we are out in the woods.	21	79	40	60	14	85
8. There were not any Barn Owles here before white man arrived since the Indians did not have barns.	25	75	38	42	19	81
9. The main purpose of a Land Lab is to have a place to study nature.	89	11	96	4	91	9
10. We can learn more outdoors because we can learn about real things.	88	12	79	21	72	28

Appendix H (continued)

	1970 With Outdoor Experiences Percent True		1970 Without Outdoor Experiences Percent True		1971 With Outdoor Experiences Percent True	
		False		False		False
11. All the leaves on a particular tree change color at the same time as they are all affected by the same weather conditions.	20	80	38	42	29	71
12. When you plant little trees, you should plant them deep enough that the bottom leaves or branches are at the ground level.	31	69	22	78	18	82
13. We planted only seeds to get the onions, radishes and lettuce that we raised in our gardens.	45	55	43	57	48	52
14. All the kids were more fun to be with when we had school outdoors.	84	16	70	30	82	18
15. We don't feel any colder outdoors when the wind is blowing than when it isn't.	11	89	14	86	17	83
16. Boys plant trees better than girls do.	31	69	20	80	37	63
17. Seeds just fall off the plant when they ripen in the fall.	44	56	47	53	22	78
18. Groundhogs are the only thing that hibernates around here.	10	90	24	76	10	90
19. Girls plant gardens better than boys do.	30	70	23	77	36	64
20. The bigger the plant the bigger the seeds.	31	69	24	76	19	81

APPENDIX I

PERCEPTIONS OF VALUES OF RESIDENT OUTDOOR EDUCATION: PARENTS" OPINIONNAIRE, 1969 and 1970 - PERCENTAGE TABULATION

1969 upper row N = 174
1970 lower row N = 205

	Item	Percent Yes	Percent No	No Opinion
1.	I feel that my child had an opportunity to develop some responsibilities while at camp.	87 88	11 10	1 2
2.	Resident Camping helped to improve my child's self concept and self image.	68 66	28 27	3 6
3.	My child is better acquainted with his teacher this year than he has been with teachers in the past.	79 67	19 30	2 3
4.	My child was given fair and kindly treatment at camp.	97 97	1 1	2 2
5.	My child's relationships within the class have been affected in a positive manner.	72 70	21 21	7 9
6.	I feel that I have an understanding of what Outdoor Education is.	91 96	9 3	 1
7.	My child made new friends while at Camp Ohio.	79 68	21 33	1 3
8.	My child talked freely about his experiences at camp.	94 93	6 7	
9.	I noticed a change in my child's manners after camp.	17 14	81 83	1 3
10.	The teacher and my child have developed a better understanding of each other as a result of the Resident experience.	64 60	30 30	7 9
11.	My child's actions show that he continues to think about or use what he learned at camp.	70 74	26 22	4 3
12.	There was interest shown in my child at camp.	88 89	7 5	3 6

Appendix I (continued

Item	Percent Yes	Percent No	No Opinion
13. This provided a good opportunity for my child to live with people outside of the family.	97 96	2 3	1 1
14. We should preserve the outdoors for the future.	97 97	1 2	2 1
15. The rapport developed between my child and his teacher during the resident experience has eliminated many problems in the classroom this year.	40 44	46 48	13 8
16. This was my child's first time away from home.	20 15	76 84	
17. The departure and pick-up times were convenient for us.	99 98	1 2	1 1
18. The fee for the resident experience was reasonable.	97 100	3	
19. Did you purchase any clothing or equipment especially for camp?	58 35	42 64	 1
20. This was my child's first camping experience.	27 30	72 70	

PART II - RESPONSES USING 5 POINT RATING SCALE

		Percentage of Replies					
		1	2	3	4	5	
1. How well was your child prepared by his teacher to go to camp?	Very well	89 74	4 9	5 10	 1	1 2	Not at all
2. From you child's reactions and conversation how would you rate the camp facilities?	Excellent	54 60	19 15	15 17	4 3	6 2	Poor
3. How would you rate the discipline at Camp?	Excellent	69 59	18 17	7 14	1 1	1 2	Poor
4. How strongly would you endorse such an experience for all children at some time during their school career?	Devinitely	82 86	6 4	9 6	 1	3 2	Not at all

Appendix I (continued)

			Percentage of Replies					
5. How well were you informed of the program prior to your child going?	Totally	82 72	9 16	4 5	3 3	1 3	Not at all
6. To what extent was your child excited about going to camp?	Very	81 81	5 8	8 6	 1	3 2	Not at all
7. How well do you rate the total resident outdoor education program?	Excellent	72 79	14 11	11 6	 1	 1	Poor

8. What do you think that your child got at camp that he could not have gotten in the normal school situation?

9. Additional comments:

APPENDIX J

TABULATION OF REPLIES: PARENTS' OPINION ON OUTDOOR EDUCATION

1970 upper row N = 70 (last year)
1971 lower row N = 77 (this year)

Item	No. Yes	No. No	No. Undecided
1. My child has told me about at least one outdoor activity he or she participated in this year.	65 66	5 11	0 1
2. My child seems more enthusiastic about outdoor education than indoor education.	54 62	14 12	2 3
3. My child has learned some things through outdoor education that even I didn't know.	40 51	22 22	8 5
4. I was aware that my child had planned learning experiences outside the school building, i.e., outdoor education.	50 66	16 12	4 0
5. I have seen articles in the local and community newspapers about outdoor education in our area.	49 63	20 15	1 0
6. My child did not like the outdoor education activity he or she was a part of.	17 11	49 61	4 5
7. I think that children can learn more indoors in a given length of time than they can outdoors.	16 12	48 54	6 12
8. I am in favor of outdoor education in our school system and would like to have it continued.	70 76	0 1	0 0
ADDITIONAL QUESTIONS NOT ASKED IN 1970 EVALUATION			
9. I think outdoor education activities are frivolous and should be eliminated from the curriculum.	1	76	0
10. In my opinion, outdoor education experiences can be important in helping us to solve some of our environmental problems.	74	2	1
11. I believe that children can learn many things of importance through outdoor education that they cannot learn in the classroom.	74	2	1

APPENDIX K

PERCEPTION OF VALUES OF RESIDENT OUTDOOR EDUCATION
TEACHER OPINIONNAIRE

1969 upper row N = 8
1970 lower row N =11*

	Item	No. Yes	No. No	No. Opinion
1.	I feel that my students had an opportunity to develop some responsibility while at camp.	8 11	0 0	0 0
2.	Many of my students improved in self-concept and self image.	7 9	1 1	0 1
3.	I feel that I am better acquainted with my students this year than with students in years past.	7 8	1 3	0 0
4.	My students talk freely and often about experiences they had at camp.	7 8	1 3	0 0
5.	There was good correlation of classroom activities (curriculum) to our week at camp.	1 6	6 4	1 1
6.	I feel that I have an understanding of what outdoor education is.	8 11	0 0	0 0
7.	Many of the children in my class made new friends at camp.	8 8	0 3	0 0
8.	My students talked freely about their experiences at camp.	8 11	0 0	0 0
9.	I noticed a change in my students' manners after camp.	8 5	0 5	0 1
10.	I feel that the resident camping enabled me to better understand and help my students this year.	7 8	1 2	0 1
11.	The actions of my class show that they continue to think about or use what they learned at camp.	6 7	1 3	1 1

*Note - One of these teachers was a last minute substitute. Many of her replies were in the "No Opinion" column necessarily.

Appendix K (continued)

12. There was enough equipment and materials to meet the needs of the class at camp.	6 7	2 4	0 0
13. There were very few discipline problems at camp.	8 10	0 1	0 0
14. We should preserve the outdoors in the future.	8 11	0 0	0 0
15. I feel that we have had fewer problems in the classroom this year due to the rapport developed at camp.	5 7	1 2	2 2
16. The grouping of students for cabins, discovery time and eating caused few problems.	8 8	0 3	0 0
17. Staff responsibilities were divided fairly.	8 11	0 0	0 0
18. I had sufficient time free at camp.	4 11	3 0	1 0
19. The college or High School students were of value.	6 4	2 3	0 4
20. I feel that high school students on a full time day-night basis would be just as helpful as the college students on part time.	5 9	1 1	2 1
21. I spent too much time in pre-camp planning.	2	6	0
22. I was still confused when I left for camp.	1 1	7 10	0 0
23. My confusion and anxiety went away once I got to camp. (if you had any)	6 7	0 3	2 1

APPENDIX K (continued)

PART II - RESPONSES USING 5 POINT RATING SCALE.

			Number of Replies					
			1	2	3	4	5	
1.	How well were you prepared by the Outdoor Education staff to go to camp?	Very well	1 4	5 1	2 4	0 1	0 0	Not at all
2.	How would you rate the discipline at camp?	Excellent	4 3	3 7	1 0	0 1	0 0	Poor
3.	How strongly would you endorse such an experience for all children at some time during their school career?	Definitely	8 7	0 2	0 0	0 2	0 0	Not at all
4.	How do you rate the total Resident Outdoor Education Program?	Excellent	3 3	5 6	0 1	0 1	0 0	Poor

5. What do you think you and your class got at Camp Ohio that you could not have gotten in the normal school situation?

6. Comments.

APPENDIX L

TITLE III PHASE-IN REPORT
for
WORTHINGTON PUBLIC SCHOOLS

A. The following data was requested in Ohio Guidelines for Title III, ESEA:

1. Project name: Tri-District Cooperative Development Land Laboratories.

2. Project number: 45-69-5467.

3. Name of LEA: Worthington Public Schools.

4. Project began: June 15, 1968.

5. Amount of each grant and Total:

1968-69	$54,775
1969-70	57,661
1970-71	31,000
Total:	$143,436

6. Project termination date: June 14, 1971.

B. Tri-District activities and objectives:

1. Development and maintenance of a series of land laboratory outdoor teaching sites, and a program headquarters.
2. The acquisition, maintenance, and distribution of apparatus, equipment, and materials for conservation and outdoor education.
3. Development and dissemination of teaching materials and resource units for conservation and outdoor education.
4. An extensive program of inservice training for teachers in the areas of conservation, outdoor and/or environmental education.
5. Assistance to teachers in planning, conducting and follow-up of outdoor experience.
6. Organization and administration of a program of resident education for the 6th graders in tri-district schools.
7. Intradistrict and agency cooperation in the development of school and public concern for conservation and environment.

To a large degree, this project has been focused on encouraging, enabling and assisting teachers to provide children with educational experiences in conservation and outdoor education. By doing this, those directly responsible for the project hope to reach the objectives originally set forth: (1) physical facilities, (2) teacher involvement, training, and inter-district cooperation, and (3) public support--ultimately leading to a concerned citizenry knowledgeable and appreciative of the out-of-doors and its environment. There were no changes in project direction for 1970-71. The plan for project development remained the same as was indicated in the initial project application. Some project goals established for 1970-71 are listed below:

a. Increase the number of classes participating in the on-school-site gardening program from 75 to 120.
b. Achieve 100% participation in the 6th grade resident outdoor
b. education program.
c. Initiate an environmental studies elective course at the high school level in all three school districts.
d. Decrease emphasis on development of selected school sites for land laboratories and increase minor development activities to include all school sites in the three school districts.
e. Conduct on-school-site workshops at every school at some time during the 1970-71 school year.
f. Replace stipend payments for attendance at outdoor education workshop with college credit or inservice credit.
g. Increase involvement of the communities in the project activities through use of community resource personnel.
h. Initiate a resident outdoor education program at the high school level.
i. Increase public understanding and support of outdoor education through greater personal contact with civic and community organizations and greater use of the mass media.
j. Disseminate project information to other parts of the state of Ohio by conducting an environmental education leadership conference.

C. All the program activities and objectives listed (1) through (6) above will be continued. Item (7), in so far as Westerville and Grandview are concerned, will be discontinued. The Westerville School system has indicated withdrawl from the project as of June 1971, due to cutbacks in its operating budget after a school levy defeat. Westerville was the largest school system in the Tri-District Project. Grandview has also indicated it will discontinue the tri-district arrangement. The phase-in reports of the latter two school systems are written separately and enclosed.

D. All of the program activities and objectives cited previously will be continued when Title III support is discontinued, with the exception of inter-district cooperation. The number of personnel will be reduced to one full-time outdoor education teacher and a secretary-teacher aide because the tri-district arrangement will be dissolved. All financial support for all activities will come from Worthington Board of Education funds. An estimation of expenditures is given below:

STAFF	1 Coordinator-Teacher (9 months)	$8500
	1 Secretary-Teacher Aide (9 months)	4500
	1 1/2-time Maintenance and Custodial (9 months)	2000
	40 Resident O. E. Teachers ($10/day X 5 days)	2000
TRAVEL	O. E. Trucks Used Entirely (gasoline)	450
CONTRACTED SERVICES	Camp Facility Use Fee - 2500 Camper Days @ $0.80	2000
	Staff Expenses at R. O. E. (90 staff)	1500
EQUIPMENT		500

OTHER EXPENSES	Utilities	1000
	Fixed Charges	2500
MATERIALS & SUPPLIES	Administration	100
	Instruction	300
	Maintenance	200
	Total:	$ 25,550

E. An inventory of all equipment, with the exception of books, is attached to this report.

F. All of the present equipment will be utilized in our continuing program. However, we would welcome guidelines from the Title III office in sharing this equipment with Westerville and Grandview so that they can support their phase-in reports with an equitable amount of the equipment needed from the enclosed inventory.

APPENDIX L (continued)

TITLE III

OUTDOOR EDUCATION PHASE IN PROGRAM

for the

GRANDVIEW HEIGHTS PUBLIC SCHOOLS

Three years ago an outdoor education program was initiated in the Grandview Schools through the formation of the Tri-District Outdoor Education office of which we were a part. Through the efforts of Gene Knight, Coordinator, the program has grown from a point of little activity and interest to one that reflects increased support and growth. Student and staff involvement has increased considerably over the three year span.

The major thrust of our outdoor education program has been in the following areas:

1. Resident Camp Experience over the last three years. Approximately 600 fifth and sixth grade students have experienced extensive outdoor education activities at Camp Ohio.

2. Last year all fourth grade classes experienced a half day session at one of our Tri-Districe land laboratories.

3. Many of our fifth grade classes have utilized the Columbus Park facilities as an extension of the classroom.

4. There has been some on site development and some city park development for near by land laboratory use.

5. We have had staff participation in inservice workshops.

6. There has been the development of gardens at some of our school sites.

7. There has been optional field trips as they relate to classroom units of study. (i.e. visits to streams, junk yards, etc. to study pollution.)

8. There has been utilization of staff personnel from outdoor office to serve as resource people.

9. There has been staff involvement in developing units of study.

The above mentioned areas are not intended to indicate we are doing all that needs to be done in the area of outdoor education. We feel only that we have made a good beginning and that additional time, effort, and leadership will be required to promote continued growth.

OBJECTIVES

Our overall objectives as we plan to continue our outdoor education program would be very similar to those stated in the initial planning for the project ... namely:

1. To increase the quantity and effectiveness of conservation education through first hand experience.

2. To broaden the scope of outdoor education in the minds and practices of teachers and to increase the quantity and quality of the outdoor education experiences provided to students.

3. To increase the range of grades and curriculum areas in which outdoor education is done.

4. To further educate teachers in outdoor education through their involvement in curriculum development.

5. To encourage greater utilization of teacher guides and suggested activities which have already been developed.

6. To make some arrangement for possible use of land lab facilities that will no longer be available to us through the Tri-District office.

7. To demonstrate the value of resident experience in outdoor education.

8. To increase public understanding and support of outdoor education.

PHASING IN PROCEDURE

for the continued development of outdoor education program in the

GRANDVIEW HEIGHT PUBLIC SCHOOLS

1. There is the possibility of a director or coordinator being employed on a part time basis, who would assume major responsibility for the continued development of the outdoor education program.

2. We further hope to initiate a local planning committee of teachers whose responsibility would be to evaluate and assign designated units to particular grade levels. Our intent is not to be restrictive but to provide for some continuity in our program.

3. We are planning to work with civic groups in the development and beautification of city property.

4. The present resident experience for outdoor education at Camp Ohio will be continued.

5. The present half day field experience for fourth grades will be continued.

6. Trail guides will be maintained and expanded at Wyman's Woods and at school sites when feasible.

7. We hope to develop a list of resource people who could be of assistance to teachers.

8. We would hope to continue with all of the field trips and activities of value which were initiated under the Tri-District office.

COSTS TO SCHOOL BOARD

* Salary of part time coordinator	$ 2000
Transportation costs for field trips and busing students to and from Camp Ohio	600
Staff (student aids and teachers) expenses for resident outdoor education program	176
Substitutes to replace staff members at resident camp	286
Use of resident education facility	225
Additional equipment and materials	300
TOTAL	$3587

* Assuming a part time coordinator is hired. This has not been finalized as yet.

APPENDIX L (continued)

OUTDOOR EDUCATION IN WESTERVILLE

PREFACE

Daily Programs

On going daily programs such as those listed on page 2 of "Outdoor Education in Westerville" are almost too numerous to keep track of. It would be an ardous task to complete a list indicating everytime a teacher took a class out for an outdoor activity. (A good indicator of those activities which utilized assistance would be the appointment books of the outdoor staff).

COSTS

I can only indicate the cost of the past year as I have no way of knowing what the outcome of this year will be. These costs reflect only major costs and do not attempt to reflect small costs that might be absorbed by schools themselves, PTA, or other organizations.

(a) Resident Outdoor Education--ROE

Camp Ohio	$8,455.06
Geneva Hills	2,379.77
Substitutes	651.00
Extended Service	690.00
	$12,175.83

(b) Field Trips

Month	No. of Trips	
September	9	45.00
October	47	314.50
November	28	335.50
December	21	112.00
January	14	64.00
February	25	143.50
March	27	310.00
April	55	298.00
May	87	496.50
June	13	60.00
	326	$2179.00

It should be noted that the total cost of field trips does not include those people who drove their own bus. As we have quite a few, the estimated cost would be closer to $3,000.

B. The enclosed copy of "Outdoor Education in Westerville" is a summary of the program objectives and to what extent each has been accomplished in Westerville.

C. Objective 4--To develop facilities for outdoor education on the grounds of every school.

Of all of the objectives, this is the only one we will not be working to accomplish. This decision is based on two facts:

(a) It would be almost physically impossible to develop "Land Labs" on the grounds of several of our schools.

(b) There is a land lab within walking distance of these schools.

D. At the March 9, 1971, meeting, the Westerville Board of Education voted unanimously that Westerville City Schools continue their Outdoor Education program. To insure the continuance they maintained Mr. Joe Borst as Outdoor Education Coordinator. Mr. Borst will be devoting one half of his day to the Outdoor Education Program.

Major Programs

During the three years, several major programs were established in the Westerville School System and are planned to be continued. These are termed major because they tend to involve a large number of classes and were aimed at enhancing one particular content area. (1) Gardening Program--Each participating primary class is supplied a plowed garden plot, a gardening packet of instructions, 4-H circulars on gardening, and cooperative extension service materials, rakes and hoes, packets of seeds, and a booklet of related activities. Classes are given assistance upon request. (A complete packet may be obtained from the Tri-District office for further study). (2) Fourth Grade Outdoor Education Program--The objectives of this activity are: (a) to introduce the out-of-doors for use as a laboratory; (b) to build a concern and an appreciation for the out-of-doors through direct involvement; (c) to introduce an organized, systematic data collecting procedure; and (d) to introduce the proper use and care of equipment used in outdoor study.

All Westerville fourth grade classes were scheduled to participate in this program (≈ 569 students). (The total program can be found in "Fourth Grade Outdoor Education Pilot Program"). (3) Geology Transect--A cross county geology field trip has been quite popular with the 5th graders in conjunction with their geology unit. The trip is an all day trip using many privately owned facilities as resources. (For details see "Geology Transect of Franklin County"). (4) Resident Outdoor Education (ROE)--This is the highlight of the program for the 6th graders attending Camp Ohio during the spring and fall of the year. In addition to the 6th grade ROE this will be our third year for the 8th grade Geology Camp at Geneva Hills, a tremendous culmination for a year of Earth

Science. (For details see "Resident Outdoor Education--Policies, Procedures, and Planning").

(c) Tri-District Outdoor Education The contribution of the Westerville Board of Education to the Tri-District Outdoor Education Program.	$10,042.20
(d) The cost of a half time Outdoor Education Coordinator	3,500.00
Total	$27,897.03

E. Nonapplicable

F. At present, the writer is not aware of any equipment that would not be used in continuing an active Outdoor Education program.

The main point to be made is that an active Outdoor Education program would be extremely hampered without the continued use of much of the equipment and materials now available. Whether the ROE and gardening programs or the simplest on-school-site activities they require supporting materials and assistance to make them feasible.

PHASE-IN REPORT
OUTDOOR EDUCATION IN WESTERVILLE

by Joseph M. Borst
Outdoor Education Coordinator
Westerville City Schools
December 30, 1970

Prepared for
Mr. R. Bertelsen
Curriculum Coordinator

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PRESENT PROGRAM

As of date, we are now well into the third year of a cooperative Title III Outdoor Education Program involving Grandview, Westerville and Worthington School Districts.

Below are listed the objectives of the program as set forth by Johnson and Hug in their original proposal to the Office of Education. The comments following the objectives are those of the writer, pointing out those events that have let to the accomplishment of each.

"The general objectives are to increase the quality and effectiveness of conservation and outdoor education, to develop facilities for such education, and to develop interdistrict cooperation for the improvement of education." More specifically:

1) To increase the quantity and effectiveness of conservation education through firsthand experience.

COMMENTS:
As of date, Westerville teachers and students have had first-hand experience through the efforts of the program. These figures do not indicate the number of times a teacher has carried out an activity on his own after being exposed to the program.

2) To broaden the scope of outdoor education in the minds and practices of teachers and to increase the quantity and quality of the outdoor education experiences provided to students.

3) To increase the range of grades and curriculum areas in which outdoor education is done.

COMMENTS:

The scope of outdoor activities is almost limitless. Listed below are but a few of the activities in which Westerville teachers and students have been involved. The activities include grades K-12 and cover most areas of curriculum.

The quantity and quality of the experiences has been inhanced by the quality of teachers employed in the Westerville system and the number of these teachers availing themselves to outdoor training through workshops and outdoor teachers.

Hunter Safety
History Trip
Ohio Caverns Trip
Insect Study
Indian Art
Geology Transect
Pollution Slides
Water Treatment Plant
Plants
Gardening Program
Weather Instruments
Blendon Woods Trip
Animal Homes
Willow Whistles
Alum Creek Water Study
Making Maple Syrup
Fort Ancient Trip
Hocking Hills Trip
Resident Outdoor Education
High School Horticulture

4) To develop facilities for outdoor education on the grounds of every school.

5) To develop and use the potential for outdoor education existing on school grounds and other lands owned by the schools.

6) To develop specialized day-use facilities for outdoor education. These would be school land laboratories intensively developed on the better sites. It should include some winterized outdoor-education centers. It should eventually include a "children's farm" because it is becoming increasingly difficult for urban children to have meaningful contacts with this large phase of industry.

7) To develop arrangements for sharing good facilities with other schools both outside and inside the school district.

8) To develop programs and arrangements for making use of outdoor-education facilities of other school districts and of non-school agencies, e.g. Columbus Metropolitan Parks.

COMMENTS:

The development of outdoor education facilities on the grounds of every Westerville school would be impractical at this point in time. One land laboratory was developed at Whittier Elementary and a second proposed for

Walnut Springs Junior High. Although they were specially designated for outdoor education, they received about the same traffic as other school grounds.

Use has been made of Sharon Woods and Blendon Woods of the Columbus Metropolitan Parks. Spring Hollow, the Adult Outdoor Education Center of the Columbus Metropolitan Parks has also been utilized for teacher training workshops. The use of the Parks has not been as extensive as would be desirable due to the stipulations regulating the use of the parks. It has been suggested that one of the parks, Sharon Woods, be designated as an educational center with a program aimed at the elementary level. We should be working toward that end.

The facilities of other school districts such as Dublin and Worthington Schools and private facilities such as Marble Cliff Quarries and Camp Lazarus have been utilized during the program.

To present, Westerville has no specialized day-use facilities for outdoor education, no "children's farm" nor winterized outdoor education center. No segment of any land presently owned by the Westerville System has been officially designated for outdoor education.

9) To educate teachers in outdoor education through involving them in the development of facilities and helping them make uses of facilities available.

10) To develop and publish teacher guides for outdoor education in the facilities readily available.

14) To provide opportunity for the development of programs to educate preservice teachers in outdoor education. Hopefully, to assist institutions of higher education in the development of such programs.

COMMENTS:

Teachers have been afforded the opportunity to further their education through inservice workshops, The Committee of Teachers for Outdoor Education (CTOE), graduate study through the Ohio State University and extended summer workshops. Through each of these choices, teachers have developed and utilized materials and aids in the area of outdoor education.

In addition, the staff of the project has developed an intensive study library, a series of outdoor study units and a variety of unique equipment lending itself to outdoor education.

The outdoor staff themselves have been most instrumental in the education of teachers and development of materials. Through their work with many of the teachers, a number of publications have been prepared.

The publications are too numerous to mention at this point, but copies are on file in the curriculum office or may be obtained from the Outdoor Education office.

Teachers and students were involved in the development of the Whittier land laboratory. Although this is the only formal facility in the Westerville District, teachers have been trained from every building in the use of the out-of-doors.

11) To develop procedures for interdistrict cooperation in facilities and program development for many aspects of education.

COMMENTS:

This is the essence of the program itself. Without such cooperation the program could never have gotten off the ground.

12) To demonstrate the values of resident experiences in outdoor education.

13) To measure the effects of outdoor education on students.

15) To demonstrate the need for the acquisition and development of a resident facility for outdoor education and to enlist the cooperation of sufficient school districts to make this development possible.

16) To increase public understanding and support of outdoor education.

COMMENTS:

The aspect of evaluation is one in which the writer has taken a special interest. With the great push for "accountability" from today's public, evaluation is a must.

The writer has constructed and administered a number of evaluation instruments as well as working with Dr. Malcolm Swan, professor of Outdoor Teacher Education at Northern Illinois University, in the development of the evaluation for the overall Title III project. The verbatim results of these evaluations can be procured from the 1970 Continuation Grant Application. The results will be condensed and summarized here.

One of the programs evaluated was the resident outdoor education program. In this study, an opinionnaire was distributed to parents, students and teachers who had participated in the program. The results indicate the following:

1) A definite increase in student-teacher rapport for the school year.

2) An advancement in the social relations of the class.

3) A decrease in discipline problems throughout the year
4) A greater awareness of the out-of-doors

In short, the resident program in the fall of the year places the social development of the sixth grade class at least two to three months ahead of those who do not participate. It affords the student an opportunity to view his teacher in a different light, thus leading to a decrease in discipline problems and a well developed student-teacher rapport.

Ninety-seven percent of the parents endorsed such an experience for all children at some time during their school career with the same percentage feeling the fee for the resident experience was reasonable.

It was also interesting to note that 100% of the parents answered yes to the following:

"I am in favor of outdoor education in our school system and would like to have it continued."

To quote Dr. Swan's summary on parents' comments, "The replies of these 180 parents reflects a favorable attitude toward the resident program. Apparently an excellent job was done to keep them informed and to solicit their approval. The replies were highly favorable."

The overall effects of outdoor education on students were measured by Swan through several instruments; The Inventory of Attitudes, Interests and Appreciations; Interest Inventory; and Questions for Boys and Girls Who Have Had Classes in the Outdoors. The results indicate an increased awareness of, as well as a respect for and knowledge of the out-of-doors.

In summary, the writer will quote from Dr. Swan's conclusions to his evaluation of the Title III Program.

"In the Evaluator's judgement a valuable program is becoming established through the cooperation of the Worthington, Westerville, and Grandview School Districts and ESEA Title III that serves their children, teachers and citizens. This is a conservation-outdoor education program involving many persons and groups and one designed largely to assist teachers to meet educational objectives relating to the development of (1) understandings, (2) interests, (3) appreciations, and (4) concerns about the out-of-doors and man's environment and to enrich all subject areas. It generally has qualified and conscientious personnel and excellent facilities and equipment; and seems to be receiving the support of parents, children, teachers, and school administrators."

FUTURE PROGRAM

It is the firm belief of the writer that Westerville should maintain a quality outdoor education program. The sustaining of a working program will necessitate the development of a facility and a staff for said purpose.

FACILITY:

The facility should be a large tract of land with a building of sorts that could be considered a "center". One possibility would be the purchase of a retired farm and buildings such as the one adjacent to Walnut Springs Junior High. The buildings could be renovated to provide a "center" and the grounds would provide an excellent outdoor facility. Another possibility would be to operate a cooperative program with the City of Westerville Recreation Department. The City would provide the land and facility and the schools would provide the staff. Such an arrangement might be worked out with the new park land purchased adjacent to Cherrington Elementary.

Facilities for the resident outdoor education program would continue to be leased from private agencies. It should be noted that Camp Ohio has constructed several new dorms specifically for resident outdoor education. The rates at this facility are the lowest known at this time.

A policy needs to be established regarding the involvement of all sixth graders in a resident outdoor education experience. Perhaps a policy such as Worthington and other districts have adopted is in order. In this instance, sixth grade teachers are informed before they are hired, that a resident experience is part of their teaching responsibility. Students should not be penalized for the actions of their teachers. Likewise, teachers should be made aware of the responsibility prior to the signing of a contract so they will not be ostracized by their students or contemporaries. If equal opportunity is not going to be made available to all students, an alternative of events should be considered.

STAFF:

An active, functioning program would require at least one full-time person with an efficient secretary. Considering material and program development, resident program involvement, and the number of elementary teachers alone, this person could average less than one day per teacher per year. Thus, an effort should be made to establish the position of the outdoor personnel as a "resource person". The personnel may exercise the position of an administrator, but should not be viewed as a "supervisor" or other "evaluator" by the teaching staff. The effectiveness of the personnel will depend on their ability to work freely and openly as a resource to the teachers.

As qualifications, the personnel should have: a Masters degree in education and/or experience in outdoor education; background in outdoor-environmental education; and teaching experience.

LEADERSHIP:

A major portion of any program should be devoted to the development of good leadership within the schools themselves. To accomplish this end, inservice workshops should continue to be a vital part of the program. In addition, teachers should be encouraged to visit other programs and attend leadership conferences.

ASSISTANCE:

With the signing of Public Law 91-516 (Environmental Education Act) 45 million dollars were provided over a three year period. Ohio has traditionally been a 5% state, thus we could expect over 2 million dollars to be coming into our state. The funds are earmarked for curriculum development and dissemination, support of state and local school programs, and training in environmental education for educators as well as for those in other fields. The act also provides grants for the planning of outdoor ecological study centers, community education programs mainly for adults, and the preparation and distribution of materials for the mass media.

It might be considered quite advantageous in obtaining grants to have an active ongoing environmental education program.

PERSONAL STATEMENT:

It becomes quite obvious if we look at our present society that there is a need for concern about our environment and its inhabitants. We can pay lip service to many problems. We can pass acts of Congress to eliminate pollution and improve the environment. We can talk about all forms of conservation, but we will never succeed until we conserve our most precious resource--our children!

Children must have a sound program at an early age if they are to learn to respect and preserve their environment. This program must be a forward looking program. It must exemplify what we want our children to become and do. It must follow the thoughts of Goethe:

> "If you treat an individual as he is, he will stay as he is, but if you treat him as if he were what he ought to be and could be, he will become what he ought to be and could be."

APPENDIX L

PROPOSAL FOR UTILIZATION OF EQUIPMENT AND MATERIAL FROM THE TRI-DISTRICT OUTDOOR EDUCATION PROJECT

The three districts comprising the Tri-District Outdoor Education Project, Westerville, Worthington and Grandview, have all submitted phase-in reports for their continuation of outdoor education in their individual districts. The utilization of the equipment and material was discussed with the three superintendents of the districts involved. From those opinions the interim director of the project in conjunction with the Worthington Schools (the project initiator) proposes the following plan for continued utilization of equipment and material:

In order that the needs of the three districts be adequately met, it is proposed that the equipment and material remain titled to the Worthington School District. They will be available on a loan basis to the other two school districts when requested. Worthington is the only district that has an outdoor education laboratory building as such, and is in a better position to house the equipment involved. Worthington is also centrally located between the other two districts.

Pick-up and delivery of equipment and material needed would be the responsibility of each district making a request. Breakage and loss of equipment and material would be replaced by the borrowing district. Repair and maintenance of equipment would fall on the district utilizing it at the time of the need.

Worthington will maintain its outdoor education laboratory office at the river side with available secretarial services so that all requests for use of equipment may be phoned and coordinated for the three districts. Phone Number: 888-0357.

This plan is proposed because it would most effectively enable all three districts to carry out their proposed phase-in reports as originally submitted to the Title III office in the spring of 1971.